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FEBRUARY, 1879.

THOSE who do not make home beautiful and happy are morally or intellectually inferior, generally both, though not always. Men intellectually strong are sometimes moral infants, and too often deformities. Some beautiful things tax the pockets even of the rich rather sorely, but as a general rule, beauty is free or within the reach of all. The diamond is costly, and fortunate are those thought who possess but a solitary gem; yet the dew-drop glistening in the morning sun is more beautiful, free to all, and is supplied by Nature with a hand so lavish as to make the landscape sparkle with beauty and glow with gladness.

We may not, dear readers, be able to indulge in Camellias, and costly Ferns and Orchids, yet we can have flowers just as beautiful, almost for nothing, and those which in other lands, where the Ferns are wildlings and Cactuses a nuisance, would be more highly prized. We may not grow Oranges and Bananas; let us be thankful that we can have Apples, and Pears, and Strawberries, and pity those who are deprived of these delicious fruits, and who would be glad to exchange with us.

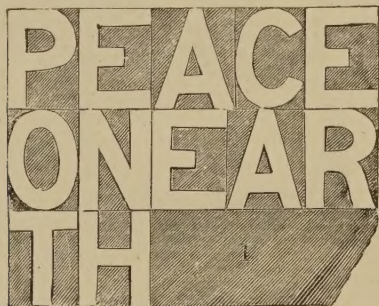
Beauty is everywhere—in the valley and on the hill-top; in the shady canyon, and on the mountain-side. Even among the snows of the Sierras the crimson Snow-plant arrests the steps of every tourist by its wonderful beauty. Pride and ostentation are expensive and troublesome luxuries, hard to please, and often calling for

the sacrifice of comfort, beauty and wealth, and bringing to their owner only envy, ill-will and all manner of unpleasantness. And yet, strange to say, these ugly things often claim to be, or to represent, the love for the beautiful—a most base and unnatural counterfeit.

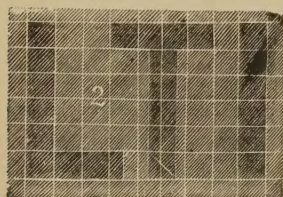
In our last we made some suggestions for beautifying homes and churches for holidays and on any festive occasion. Several inquiries received remind us that a good many things remain to be said on the subject, and we shall be happy to respond to all who need information on this subject. At present we give some suggestions on the formation of letters, and agree with our correspondent that nothing is prettier or more suggestive than mottoes.

The forming of letters neatly and rapidly is no mean accomplishment, and those who possess this art are almost invaluable at all festive gatherings. How beautiful the word "WELCOME," on some occasions; and "PEACE ON EARTH," will be new and glorious every Christmas. These letters are usually made of dry or Everlasting Flowers and dry moss, Cedar or other evergreens. Obtain heavy straw board at the book or paper stores, as shown in Figure 1, and mark out the letters with a pencil. Determine the height you wish the letters, and divide that into six equal parts by drawing lines entirely across the board, as shown in Figure 2. Four of these divisions will be a very good proportion for the width of most letters, as may

be seen by the same figure. The few letters that vary from this can be correctly made by the following arrangement: Suppose the letters are six inches high; then four inches would be



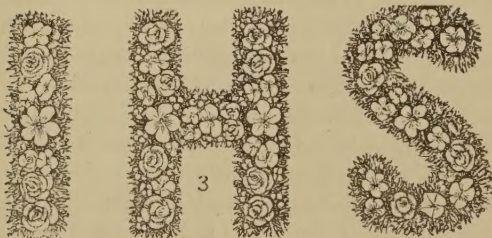
the proper width for B, C, D, H, N, O, P, Q, R, S, U, Z; four and a half inches wide for A, G, K, T, V, X, Y, &; the letter M should be five inches, W six inches, E, F, L three and a half inches, J three inches, and I one inch wide. By this arrangement letters of any size can be made by simply dividing the height into six sections, and using four such sections for the ordinary width of the letters, varying the



width to suit the other letters, as already shown, and always making the letters one section in thickness. (See the engraving, No. 2.)

Letters made by this rule look rather thin, but when covered with flowers or evergreens they are just what is wanted.

The letters being cut from the straw board with a sharp knife or strong shears, are ready to be covered. This can be done by tying with dark thread, small branches of evergreens over the face of the board, with a few Everlasting Flowers or bright berries to relieve the sombre color. Better letters, however, can be made with dry moss and Everlasting Flowers, as will be seen in Figure 3. Tie the moss over the



face of the letter as evenly as possible, then cut the stems of the flowers short, leaving only about half an inch. Dip the stem in a little paste, and insert it in the moss, and when dry it will remain secure. We have made the pret-

tiest possible letters by covering the board with Gomphrenas, or Immortelles, fastened to it with thick paste. Crosses, or any desired form, can be made in the same way as letters.

If the letters are small, say four inches in height and an inch in breadth, which is just the size of the letter from which our engraving was made, and cut from straw-board or card-board, as previously described, cover them with paste and on this place Immortelles. Two in width will just cover an inch letter, the flowers being half an inch in diameter. The best colors are pink and



purple. After the letter is covered with Immortelles, on top of them place a few white flowers, three-fourths of an inch apart, for relief. The Ammobium, (fig. 2,) is best. This and the Immortelle, (fig. 1,) we have shown of natural size. A little green moss may be used for the edges. Sometimes it is well to make the first letter of each word a little larger than the others, and of a darker color, the

first letter purple and the others pink. The moisture of the paste will cause the letters to warp, unless secured; this we do by pinning them to a board until dry. We think our



HARTFORD FERN.

correspondents, and in fact all our readers, will understand the matter, but before another winter we think of illustrating this subject more fully by means of a colored plate.

Our attention has been called to the fact that in a previous article on material especially suited to winter decorations, we neglected one of the best and most popular, the Hartford Fern, *Lygodium palmatum*, an elegant plant found in Massachusetts, Connecticut, and south to Virginia, but rare in most places. It can be found at most florists, the price being fifty cents a dozen, and specimens from eighteen to thirty inches in length.

INSECT EATING PLANTS.

For several years the papers have been enlivened by wonderful stories of the performances of carnivorous or insect and flesh-eating plants, which, it has been declared, not only with exceeding cunning entice insects to their death, actually lying in wait for their prey like spiders, and eating them up, but actually feeding on rare beef-steak, when they could get it, like highly civilized human beings. We would not be surprised soon to learn that, tired of quietly lying in ambush for their food, they were discovered in hot pursuit of their prey, or quietly taking a social glass, or even smoking an after-dinner cigar. We do not know that this would be more strange than catching, eating and digesting animal food.

Mr. DARWIN has claimed to prove by a few experiments that plants not only eat insects, but gladly devour beef, and get fat on it, when this kind of food is placed within reach of their leaves. But it has seemed to us that "the wish was father to the thought," and that these experiments were easily made, rather to prove a pet theory than to ascertain the truth. PETER HENDERSON, of New York, who has a good deal of knowledge and an unusual share of common sense, has devoted some time to the investigation of this subject, and reports the results in the *Gardeners' Monthly*, which we give our readers. We can well imagine the feelings of our old friend and neighbor, WM. R. SMITH, when he found that the snails, instead of being eaten up by the horrible carnivorous plants, sat quietly down to a good hearty meal, as is the custom of snails when they find a plant to their taste, and in this they are not over-particular.

"*Carnivorous Plants*.—Mr. FRANCIS DARWIN has proved very conclusively the truth of his father's, CHAS. DARWIN's, position, that the so-called carnivorous plants do make use as food of the insects they catch. A large number of plants were fed on meat, and as many on what they could get from the earth as best they could, and the differences in growth and final product were very much in favor of the meat-fed plants."

"The above I cut from a contemporary journal. Resolving to fairly test the correctness of

Mr. DARWIN's theory, I last season procured in March, from Keenansville, North Carolina, a large number of *Dionaea muscipula*, (Carolina Fly-trap.) The plants arrived in fine condition, and I resolved to test fairly, on a large scale, the correctness of Mr. DARWIN's conclusions. Selecting from the lot two hundred of the best and strongest plants, I thoroughly rinsed them again and again in water, so that every particle of soil and all other matter foreign to the plants was removed. I then procured two boxes, three feet by three feet, and three inches deep; these were filled with moss (*Sphagnum*) and sand mixed, in about the proportion of four parts moss to one of sand, forming a soil somewhat similar to that which they had been growing in naturally; this compost had been also subjected to the rinsing process, so as to clear it from impurities. One hundred of the Fly-traps were planted in each box, the plants selected being as nearly alike as possible. After planting, the boxes were each copiously watered with pure water and placed in a cool and partially shaded green-house. One box was covered with a wire netting, as fine as could be procured, so as to exclude insects; the other was left uncovered.

By about the middle of May, two months after planting, the plants had begun to grow freely, and the "feeding" process was begun with the plants in the uncovered box. In this I was assisted by Mr. WM. TAIT, one of my neighbors, a gentleman of leisure, and one who is well versed in many branches of natural science; between us, the one hundred uncovered Fly-trap plants were "fed" almost daily for three months with flies and other insects. In August, three months from the time the "feeding" began, the operation was stopped, and the most careful examination and comparison failed to show the slightest difference between the one hundred plants that had been "fed" and the one hundred (under the wire netting) that had not been "fed;" both lots had made a splendid growth, and were the admiration of scores of visitors. I never omitted to ask professional horticulturists visiting us for their opinion, and the verdict invariably was that both lots were identical, as near as could be. In this case the "feeding" certainly did not fatten. It may be that our American flies were not so nutritious as the English "meat," though certainly ours was the more natural food of the two, but as corroborating the test of Mr. DARWIN, it completely failed.

I had a rather ludicrous incident occur in relation to this matter. My friend, WM. R. SMITH, Superintendent of the Botanic Gardens, at Washington, who is a thorough believer in the carnivorous plant doctrine, being at my

place last winter, after the above experiment had been tried, we got into some controversy on the subject. Now, Mr. SMITH is not only one of our best botanists, but his knowledge of general horticulture is perhaps second to none in the United States. Moreover, he is a perfect Wilberforce in eloquence and argument, and having driven me pretty well into a corner, he almost squelched me by taking a magnifying glass from his pocket, and showing me, beyond a question, a minute species of shell-snails embedded in almost every one of the closed up leaf-traps of the *Dionæas*. "There," says he, "nature has placed the food—the animal food—direct into the mouths of these insect-eating plants. Can you longer doubt the correctness of DARWIN'S theory?" I was staggered, but not yet convinced, and resolved to keep a close watch on those shell-snails 'that nature had placed in the mouths of these insect-eating plants.' Very soon they required no magnifying glass to see them; in three weeks they had increased wonderfully in 'breadth and stature'; in three weeks more the biters were bitten, for the snails had eaten the Fly-traps almost completely up. Mr. SMITH has, probably, somewhat changed his base on the subject of 'carnivorous plants,' particularly as regards their use of shell-snails as an article of diet."

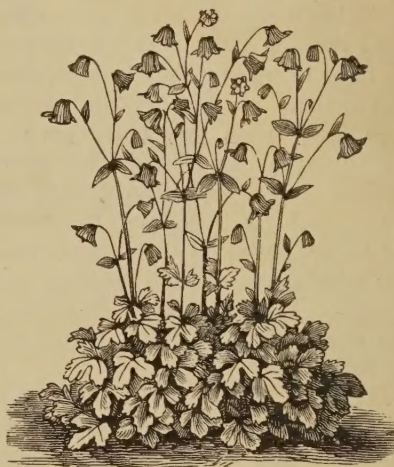
THE AQUILEGIA.

Every one must know the old *Columbine* that grows in rocky places, on the almost barren hills and on the banks of streams, and which bears its nodding flowers of red and yellow on slender, waving stems two feet in height, in May and June—in fact making their appearance as early as a ramble in the woods is pleasant. It is called Wild Honeysuckle, but this is a common name for many wild flowers; its true name is *Aquilegia Canadensis*. It is found in suitable locations all over the country, from Maine to California, and as far south as Florida. The name *Aquilegia* is from *Aquila*, an eagle, the spurs of the flower being thought to resemble the talons of that bird. The name *Columbine* was given because the spurred petals with their incurved heads were thought to bear a resemblance to a cluster of doves, the sepals representing the wings. As observed, the species that adorns the open woods in the early spring is *A. Canadensis*, yellow and red. *A. vulgaris* is the one found along hedges and by the borders of copses and thin woods in England, and is of a purple color.

By culture the *Aquilegia* became wonderfully improved, and an almost endless variety, both

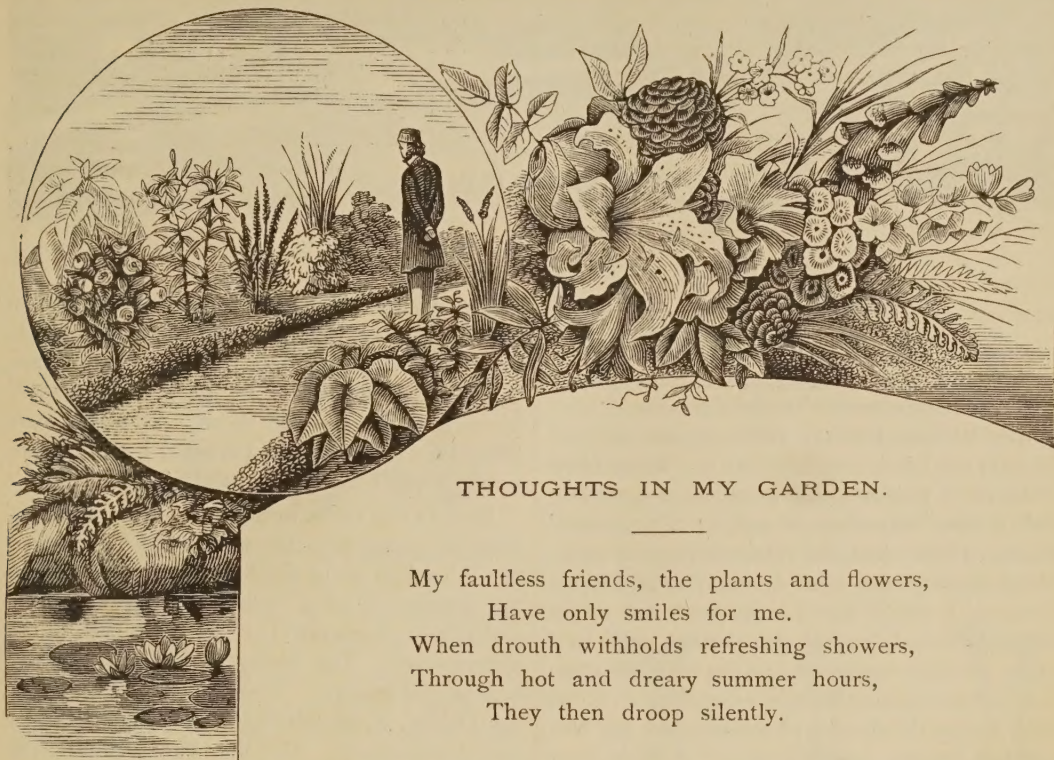
double and single, and varying in color from the purest white to the darkest imaginable purple, have for many years adorned our gardens. Save in color, however, there always existed a great similarity. When the rocky mountains became better known to the civilized world, and enthusiastic botanists were treading its summits and canyons and ranging the coasts of the Pacific in search of unknown treasures, several new species were discovered, with flowers so much larger and so different from those previously known that a new interest was at once awakened in the culture of this flower.

Three of these new sorts are shown in the colored plate, *Cerulea*, fig. 3, from the Rocky Mountains, white and blue; fig. 4, *Leptoceras chrysantha*, from Arizona; and fig. 2, *Califor-*



nica hybrida, which is claimed to be a hybrid between *L. chrysantha* and a red Californian variety. This one we have not seen in flower, and our figure is copied from a foreign colored plate. From correspondence on the subject we have reason to think it too highly colored. The other two are quite correct, except that the blue in *Cerulea* is a little too dark. They are both exceedingly hardy, flower most abundantly and for a long time, and are of a tall, robust growth, averaging nearly three feet in height. We can recommend these two varieties to our friends everywhere. Figures 1 and 6 are our common garden varieties, and the specimens were picked from a bed containing several dozen kinds grown from seed. Figure 5 is the *Skinneri*, rather small, but the most highly colored of the family.

Seeds of the *Aquilegia* may be sown under glass early, with the annuals, or later in the spring in the open ground, and in either case will make good strong plants in the autumn that will flower freely the next summer. When the seed is sown very late partial shade should be furnished until it germinates.



THOUGHTS IN MY GARDEN.

My faultless friends, the plants and flowers,
 Have only smiles for me.
 When drouth withholds refreshing showers,
 Through hot and dreary summer hours,
 They then droop silently.

When tired and worn with worldly care,
 Their fragrance seems like praise,
 A benediction in the air ;
 Pure as an unfallen angel's prayer,
 Sweet'ning the saddest days.

No frowns, no pouting, no complaints,
 In my bright garden fair.
 A colony of sinless saints,
 Whose beauty Nature's pencil paints,
 Are my fair darlings there.

No inattention can awake
 Envy or Jealousy.
 Their alabaster boxes break,
 As Mary's did, and I partake
 Of their rich fragrancy.

Sometimes with weary soul and sad,
 I taste their sweet perfume ;
 And then my soul is very glad,
 I feel ashamed I ever had
 A hateful sense of gloom.

Flowers are the sylvan syllables,
 In colors like the bow.
 And wise is he, who wisely spells
 The blossomed words where beauty dwells,
 In purple, gold and snow.

O! sacred is the use of these
 Sweet gifts to mortals given.
 Their colors charm, their beauties please,
 And every better sense they sieze,
 And bear our thoughts to Heaven.

GEORGE W. BUNGAY.





FLOWER TALKS.

"Spake full well, in language quaint and olden,
One who dwelt by the castled Rhine,
When he called the flowers, so blue and golden,
Stars, that in earth's firmament do shine."

MR. VICK:—I never take up one of your MAGAZINES but it sets me quite in a flutter, and I feel as if I were a full member of a talking club, whose sole duty it was to talk flowers. Though I have had the rare privilege of cultivating some of the most aristocratic of Flora's children, I always feel it a red-letter day to get out in the woods and on the prairies once in a while, to renew my acquaintance with the common and uncommon flowers around me. I can never forget the first trip I made to see the *Nelumbium luteum*, near Chicago. A friend and myself had been roaming around the lake for some time, searching every nook and corner, and seeing something peculiar in a quiet bay we made towards it, and there were some acres almost covered with those beautiful flowers, all holding up their heads some eighteen inches above the water. Well, I cannot tell how my companion felt, but my hat flew up in the air and dropped in amongst the Lilies, but whether my mate hurraed more than myself, I will not say. But I do know that it was a sight fit for the old Pantheists' gods, and many wishes were made that others, who think more of fine flowers than of "toast on quail," were with us to join in our love-feast. In the midst of that *Nelumbium* patch we felt richer than VANDERBILT, or any CRESUS the world has ever seen.

I see that in some of your numbers you are giving a little hint now and then as to how they encourage the love of flowers in England. I am glad of your efforts. Many is the village and town flower show at which your humble servant has had to act as judge, and it was always a labor of love. I see no reason why every town, village and city in the United States should not have three or four flower, fruit and vegetable shows in each year. I am sure it would help to save a great many from becoming "loafers," and hanging around stores and street corners. BILL JONES, or TOMMY

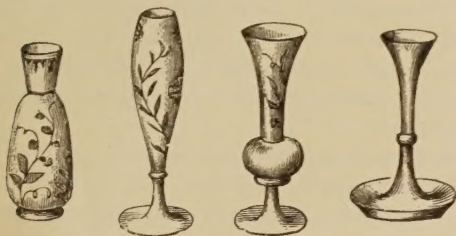
FITCH would feel more like staying at home in his leisure time, to look after his cabbage patch, or his beds of onions, or his wife's geraniums, if he thought he would be likely to get a prize for such things at some show. If prizes were offered for the best kept gardens, I am certain some people I know of would fix up a little.

How is this to be brought about? In England the clergymen are mostly the "head centers," backed up by the land owners, and even the owners of large manufacturing concerns, and almost universally give the great bulk of the prize money. The cottagers, however, do not lack in this matter. They have their own Tulip, Dahlia, Rose, Gladiolus, Gooseberry, Apple and Potato shows. Our ministers of the gospel ought to take the matter up in every nook and corner, and if they take hold of it they will do the whole country a service. HORACE MANN, in his statistics of the various callings or trades of England, (1861,) made the remark that there were less gardeners in proportion to numbers in the jails and lunatic asylums than of any other calling. Now gentlemen of the cloth, rouse up and give us sermons upon cultivating and developing the thousands of beautiful things that God has placed before us. I hold it a crime and a sin to pass through this world and know no more about the beautiful things placed so lavishly at our feet than a horse or a cow. It is our rich inheritance; let us enjoy it.

A love for flowers does not make us rich, in the common idea of riches, but there has never been, nor ever will be, any money made that will buy the pleasure that a love and knowledge of flowers brings. Some fifteen years ago I knew two old shoe makers who had spent about fifty years in the study of Botany, besides working at their trade. They had acquired so much knowledge about plants that the most learned men of Europe paid them marked respect, and often asked their advice. Both of these men have often told the writer that they could never have bought with money the pleasure they had enjoyed through life.—AN OLD GARDENER.

FLOWERS AND VASES.

MR. VICK :—I am in a quandary, and I come to you for advice, for you always tell us what to do. Now, I am not an admirer of large *mixed* bouquets, although I like a nicely arranged large bouquet where the colors harmonize. And I love saucer bouquets of Verbenas or double pink Balsams alternating with a double white, with a border of Rose-Geranium leaves. A few blossoms of those darling little



blue For-get-me-nots may be added to advantage. And there is another favorite, the Dicentra, with nothing but its own foliage, in a pure white vase. Yes, and there is the double white Pæony and a leaf in a Cinderilla slipper; nothing could be richer, although a Pink is very pretty. And,—but there are so many favorites, for I do love single specimens better than any other kind of bouquets.

I think it almost a shame to put a fine Rose in a bouquet with other flowers, I mean when making bouquets for the sitting room or pulpit. When I take a bouquet to church I like to have a Rose or a Lily in a small vase for a side accompaniment. And right here is my trouble; I can not get a vase suitable to hold a single flower; they are all too wide at the top, or else have flowers on them, and, to me, flowers on



vases are ugly, and mar the hand of Nature. I want a clear glass or with only tracery on it, else a milky white vase. I remembered that some time ago you gave me pictures of vases, and so I hunted up the Catalogues, but did not find my ideal vase. Some of them were very nearly of the shape I want, while others were to me objectionable. I have for a long time felt the need of such a vase, and have tried to get them in Columbus and other places, but I

could not find the kind I wish. I do not think a small vase that *flares* at the top holds a single flower half so nicely as a straight, slim vase, from three to five inches high. It was your chromo "D" that first imparted to me the love of side bouquets. If you had left that little Rose out of the chromo it would, to my mind, have robbed it of more than half its beauty.

I wish you would tell those who do not pluck the bloom of their fine plants, but leave them till they have withered, that they do not get half the enjoyment of their flowers; at least that is my experience. Now I pluck my finest flowers and have them in our rooms, where the whole family, and strangers, too, can have the full enjoyment of them. And besides the pleasure they afford us, I think the plants are benefited by it.

I hope you can furnish, or tell us (for I am sure there are others besides myself who feel the need of small vases,) where we can get the desired kind of vase. Will you also please tell



me of some plants that will do well in a Wardian case three feet long, two feet high, and two feet wide, that has to set in a *north* window. The ferns do well. The Begonia does not do very well. What else can I have?—VINNIE PHIFER, *London, Ohio.*

Vases are now made in endless varieties, both of form and material, and at prices to suit the means of all. A very neat vase can be obtained for twenty-five cents, or for as many dollars. We give engravings of a few common forms of the cheaper kinds, and somewhat of the form suggested by our correspondent. These we had engraved before the receipt of the letter of our correspondent. As we have a hundred different forms, we will set our artist at work, and in a future number, perhaps, will be able to present the ideal vase of our Ohio friend.

Nothing can equal bright, fresh flowers for the adornment of the sacred home, or the still more sacred house of worship. Flowers are grateful every day, and particularly so on special occasions, either of sadness or joy. Once they were costly luxuries, attainable only by the wealthy: now they are a necessity in almost every household. Happily, they can be procured at a trifling cost, and a little skill and care will do more than money in securing and presenting in the most attractive style these lovely treasures.

In addition to the ferns, we would suggest for the Wardian case *Euonymus*, *Dracanas*, *Crotons*, *Cyperus* and *Maranta*. The Begonias usually do well with a little ventilation.

FICUS REPENS.

To those readers who are not already acquainted with it, let me introduce the modest and excellent *Ficus repens*,—translated, creeping Fig. It belongs to the same family with *Ficus Carica*, the common Fig tree, and *Ficus elastica*, the India-rubber tree of the East Indies, and also *F. Indica*, the broad-spreading Banyan tree; but in appearance it differs as widely as possible from all these stately relatives. It is a delicate creeper from China, having leaves an inch or less in length, alternate, oblong-ovate, with unequal, partly heart-shaped base. In greenhouses and conservatories it is cultivated chiefly as a covering for the walls; and for this purpose nothing could be more suitable. It climbs freely along walls of brick or boards, adhering very firmly to any rough surface by the little rootlets which start out from almost every leaf-joint. When growing in con-



tact with the soil many of these rootlets become supplementary roots, thus allowing the plant to be divided easily, or its growth extended indefinitely. In pot culture the rootlets do not appear, but their absence is compensated by the formation of a prodigious quantity of roots in the pots; and for this reason the plants need, when growing, an abundant supply of water and rather frequent re-potting.

As a window plant the *Ficus repens* has many excellent qualities, which are probably not generally known. It is rarely troubled with insects of any kind, excepting red spiders when the roots become badly pot-bound. It thrives in any comfortably warm room with or without direct sunshine, and about equally well in any kind of plant receptacle, porous or glazed, if properly drained. For a perennial it grows

very rapidly if well treated, and requires little or no rest, summer or winter, for several years. In a hanging pot or basket near the light, it may be trained both upward and downward over a graceful outline or skeleton of small wires, and the slender stems, which are about the size of common wrapping twines, may be woven into lace-like patterns of any beautiful design. The membranous leaves are set thickly along the stems, and when mature are of a rich dark green, and of very firm texture,—“warranted to wash.” It is certainly next in value to the different kinds of European Ivy—*Hedera*—and with them affords just the variety of climbing plants needed for permanent window decoration.

Such opinion of this humble and rather overlooked species of *Ficus* has been formed after an acquaintance of several years, through summer and winter, beginning with two or three young plants in a small pot with a soil of rich sandy loam and leaf-mould. A specimen now hanging in one of my windows forms a close net-work of six or eight square feet, and is a constant marvel of delicacy and beauty. Having seen it doing well elsewhere and under less favorable conditions, I can not but regard it as a “valuable acquisition” to the comparatively small list of really choice window plants.—E. A. JOHNSON.

PLENTY OF FLOWERS.

MR. VICK:—In addition to a correspondence of sixteen years, it has twice been my happy lot to visit your beautiful flower-fields; (garden is too small a word for this occasion.) Only think of a *field* of Gladioli all in bloom, and another of Verbenas, and Petunias, etc. Like the poor woman who said on seeing the ocean for the first time, that she “was glad for once to see enough of something,” I was glad once to see enough of flowers. On my return home, how insignificant looked my little beds of Gladioli, Verbenas and Petunias. On one of those visits you gave me the first Auratum Lily I ever saw. I have seen many since, and have cultivated them myself, yet I imagine there never was another quite so beautiful and exquisite in every way as that first one. It filled the air about us with its sweetness as we sauntered back to the city. I pressed it in my Guide-book and brought it home, and even then it “astonished the natives.”

I have kept house-plants for several years, and have had remarkable success with almost everything I have undertaken. My Abutilons, Hibiscus, Fuchsias, Cobæas, Clereodendrons, etc., are all I could desire. This last season I purchased two plants that I had long desired to

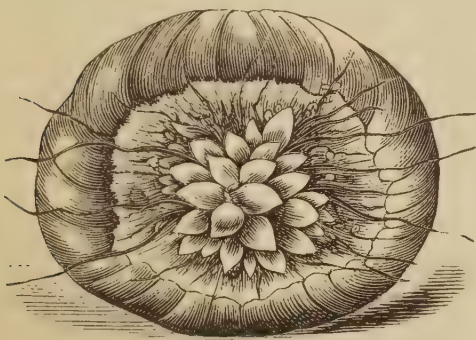
possess, but they both seem determined to die on my hands. I have searched all the authorities, but can not find anything to enlighten me as to the requirements of these pets. I have taken the best of care of them, but I, who have prided myself on almost resurrecting plants, find my skill avails nothing with the *Daphne odorata* and *Gardenia florida*, (Cape Jasmine.) Please tell me, do they want sunshine or shade, what temperature, how much water, when they bloom, etc.? If I could get plants as easily as a physician gets patients, I might experiment upon them and find out for myself, but this would be rather expensive for me.

Ladies, I am more fortunate than some of you, as I have two excellent pictures of Mr. VICK,—a wood cut in his Catalogue of 1870, and a splendid cabinet size photograph in 1872.—AUNT FANNY, *Morningside*.

Those portraits were very poor, and we design to give our subscribers something better during the year. The roots of *Daphne* decay very easily, and are very sensitive to moisture. They are generally ruined by too much moisture. *Gardenia florida* requires a moist, warm atmosphere, which is rather difficult to secure in living rooms.

GLADIOLUS.

MR. JAMES VICK:—I herewith send you a *Gladiolus* bulb for your inspection, and I would like to know if it is common for them to have so many sets form in one year? I never saw anything like it before, and when I dug it up



many of them were broken off. This bulb had a flower-stalk this year six feet high, terminating in three spikes of flowers.

Your correspondents who wish to know how and when to trim Evergreens would do well to consult some landscape gardener in California. I think they excel in the art of disfiguring what would be beautiful trees but for the excessive use of the pruning-shears. Not unfrequently we see ten or a dozen trees in the same yard, all trimmed in the form of a perfect cone, exactly of the same size and shape. They are kept pruned until the foliage is so thick and smooth that it has the appearance of a soiled surface, and would be about as ornamental, in

my opinion, if made of wood and painted green.

Please answer my question in relation to the *Gladiolus* in your MAGAZINE. And will you not be so kind as to favor your readers with a portrait of yourself, instead of a chromo, in one of the early numbers? I should like very much to have it, and I am sure others would also.—MRS. J. R. J., *Pacheco, Cal.*

The *Gladiolus*, when in good growing condition, bears very many bulblets at its base, as shown in the engraving. It usually takes two years to make flowering bulbs of these little bulblets. Take them off the large bulb, keep them from frost, and plant in the spring in rows, about as we plant Peas.

MAURANDYA.

MR. VICK:—I can fully endorse all that your Duxbury correspondent says in the November number, in regard to the adaptability of this vine for garden culture in southern Massachusetts. I have cultivated most of the vines rec-



ommended for out-door culture, and consider this one of the very best for that purpose. I have a number of conical trellises, about two feet in diameter at the base, nine inches at the top, and eight and one-half feet high, made of galvanized wire netting. One of these I annually appropriate to the *Maurandya* vine, usually planting the purple on one side and the white on the other, and allowing them to intermingle. They densely cover the trellis, from the ground to the top, on reaching which and finding no further support they droop at least two feet from that point, thus showing that they would have covered a trellis ten feet high.

I have been obliged to use knife and twine to keep them from covering other plants standing in their vicinity. Later than the first of last month (November,) the trellis was a complete mass of healthy, vigorous foliage, thickly

studded with the purple blossoms, both vines this year proving to be of the purple variety, and not one of each color, as I intended they should be. They retained their beauty after all my other annual vines had succumbed to the frost. At no time previous to November do I recollect to have seen on them a sear or yellow leaf, or any insect.—W., *New Bedford, Mass.*

The *Maurandya* is becoming deservedly a general favorite as a *summer Climber*, and we would not be surprised to find it before long as popular and as common as the Morning Glory. And this popularity it is fairly earning for itself, for no one has attempted to "puff" it into notice. Indeed, we have rather discouraged the enthusiasm it has created in its own favor. Last summer we saw some most elegant plants, and must endorse all our correspondents say in its favor.

SENECIO MACROGLOSSIS.

Among the many plants recommended by your correspondents for house culture in winter, a climber of great merit has been overlooked. I mean the *Senecio MacroGLOSSIS*, a species of



German Ivy, and although not apt to rush into print, I must urge its claims to notice. I procured a plant about three inches high in the spring of 1877, planted it in a four inch pot, plunged it in a north border, and trained it against the house. In the fall it was sixteen feet high. Next spring I changed it into a seven inch pot, and trained it as before. In the fall I had a light trellis four feet high made to fit into the pot, and wound the plant around it, forming a dense pillar of green. It is now

budded to bloom, and the first blossom out is a pale straw color, somewhat resembling an *Acroclinium* in appearance.

The chief merit of this plant is the easy manner in which it submits to any kind of treatment; put away in a corner to make room for other plants, or brought forward as a specimen, it makes no difference. One remarkable feature which I think has hitherto escaped notice is that while the leaves in their general characteristics, such as color, texture and form, resemble the English Ivy, no two leaves are alike in shape. I have closely examined my specimens, and among its thousands of leaves I cannot find any one leaf which does not, in some particular, vary from any other leaf, while the general effect is the same. I know of no plant that has interested me so much, and afforded the same *per contra* of pleasure for trouble.—MRS. R. C. La Crosse, *Wis.*

GARDENS IN OREGON.

As some of your readers complain that their Sweet Peas do not flower well I thought perhaps my experience with them would be of interest. Last spring I planted some in a box, set them by the door on the north side of the house, and trained them up on strings fastened to the wall. They began blooming early and continued in bloom about six weeks, when they appeared to have run their course; but noticing new branches coming out near the root, I kept on giving water as they needed. As the new shoots continued to grow and form buds the old ones faded and I cut them away, continuing the process all summer. When cool weather came on I carefully let the vines down, carried the box into the house and set it in the west window, fastening the cords up to the sash and frame. It has continued to bloom, though not so freely. The vines are nearly to the top of the window and still reaching up, and there are a few blooms and quite a number of buds at this writing. I shall try to keep it and see if it will not bloom all winter.

My "Sturtions," (that is what they call them here) acted in the same way, though since I brought them into the house they do not bloom, though the foliage is nice. The old leaves die and then new sprouts come out all along the same stem. If it lives through the winter I shall set it out in the spring.

Now I must tell you about my Calla. I sent back East (as we say here) for it. When the bulb came, in January last, I was sick and it was put away, and it was about six weeks before it was thought of again. It was then planted, but it looked so dry that I thought it could not grow. After waiting a long time

without seeing any signs of growth, I took it up, and there were four sprouts just starting. Of course I was delighted, and re-planted the bulb. By and by the sprouts came up, one at a time, and now one of them is a foot high; another not quite so high has three leaves. A lady told me to keep the soil very wet—even to let the water stand an inch deep on the top. I tried this, but it seemed to check its growth. About four weeks ago it began to fade; so I put it in a larger pot with better drainage, and it has taken a fresh start.

I took a stroll through the village yesterday, and noticed *Chrysanthemums* of all kinds and colors, *Violets*, *Pansies*, *Pinks* and other flowers, in full bloom out of doors.—MRS. S. A. MCK., *Amity, Oregon, Dec. 11, 1878.*

A FINE AMARANTH.

I wish to tell thee about a remarkable plant. Please don't think I misrepresent the facts. It would be nothing to my credit or thy profit to do so. If I should tell thee all I can, it would not be sufficient to give thee a correct idea of the magnificent beauty of this gorgeous plant. It was the only one of the kind ever grown; it was a gift from God. How else could such an earthly plant be produced? It was as unlike its parent as a giant *Castor Oil Bean* is unlike a *Pansy*. I gathered the seed from a diminutive little stalk eight inches high, the tri-color *Amaranthus*. When in the second leaf the colors made their appearance on all but one; that was a bright purple, but soon changed to bronze and remained so all summer. It was much stronger than the other, and grew faster. When six inches high I set it in a garden bed, where it made a rapid growth, not only tall but strong. In some ways it retained the original character, the shape of leaf, but when the stalk was three feet high the leaves were larger than a young chestnut,—broader at the stem end. It had twenty-four side branches, the lower ones growing three feet long, thick and blunt to the end.

The center stalk was four inches in diameter the 1st of November, and had roots like a young oak, when we potted it in a large beer cask and removed it to the house. It was then nearly eight feet high. There was no color but the bronze until it was five feet high, when a scarlet crown came on the end of each branch, but none anywhere else. The center stalk, which had been round, firm, and blunt to the top, now divided,—not split, but formed two branches, flat on the inside, one inch broad and one-half inch thick. These were decorated like all the rest, with scarlet crowns.

At first the little bunch of foliage on the ends turned scarlet; then they kept making out from

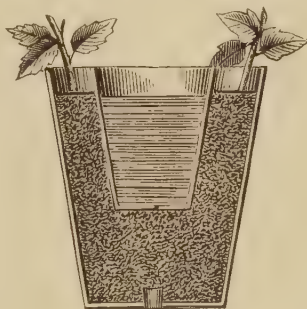
the center, until they were as large as a coffee saucer, and were bordered around with the bronze foliage as a ruffle that might have been set on with hands: but what hand so neat and artistic as the hand of Nature? The crowns were distributed in perfect order, none near together except the two at the top, the edges of which just touched lovingly together, like a wedded pair, and formed an arch underneath. They stood erect, like a king and queen, and seemed proud of their positions, looking down on their royal family bearing thirty-four crowns, each six inches in diameter. But half is yet told; if I say more I fear thee will tire of it.

Please give me the name. I have not been able to decide on a name aristocratic enough for such a heavenly plant. The seed enclosed is part of the product.—LETITIA W. WATSON, *Philadelphia, Pa.*

Our correspondent describes pretty plainly the *Sunrise Amaranth*, which we figured in the December number of the MAGAZINE.

ROOTING OF CUTTINGS.

The rooting of slips I have found a very easy matter in a double pot. I take an eight inch pot, cork up the bottom hole, and put into it enough clean sand to raise the top of a four inch pot to the height of the eight inch pot when placed thereon. I then place the four



inch pot in the center without corking, fill around it with sand, place it in a warm, sunny position, and fill with water by pouring into the small pot. Slips placed in the sand near the outer pot will root rapidly if kept warm and plenty of water is kept in the pot. In the summer I place the pots on a fence in the hottest place I can find, and in winter in a south window of a warm room. As soon as rooted, the slips must be transferred to good soil. I have never found any trouble in rooting anything in this way.—G. E. C., *St. Louis, Mo.*

A *CALADIUM*.—A Bulb of *Caladium* obtained three years ago produced over twenty leaves, more than six feet in height; and the largest was fifty-two inches in length, and thirty-nine inches in width.—J. D. J., *Baltimore, Md.*

RADISHES.

In my last I gave you some of my experience with Carrots, and now propose to speak a word or two for a favorite vegetable of mine, the Radish. I lived about half my life without appreciating the Radish, a fact which I very much regret. I had always thought them hard, hot, indigestible things, good for the dyspepsia, but bad for the stomach, and only learned my mistake when attending the first French Worlds' Fair, a good many years ago.

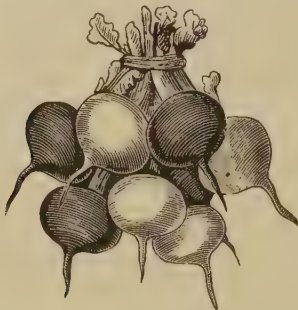
I noticed Radishes were not only served at the tables, but for breakfast, and eaten freely, and apparently with great relish. I thought those Frenchmen must have stomachs like ostriches, to eat Radishes so abundantly and early in the morning. For some time I refused to touch one, but example is infectious, and, after a few days, ventured to take one very delicately, and, to my surprise, instead of finding it pungent and tough, it

was tender and crisp, and cooling and refreshing. Still I was afraid of the results and made use of only two; but, after a week or so, was eating as many as any, and perhaps making up for lost time. This gave me an idea, and on leaving Paris I repaired to the seed house of VILMORIN & Co., and procured some French Radish seed, determined to have Radishes for the balance of my life, and believing that nothing like the French sorts were ever seen or heard of in America.

This kind I found, on growing them, to be scarlet, with a white tip, that is, around the root end, a space nearly one-eighth of the whole being white. The English obtained this



OLIVE-SHAPED WHITE
TIPPED.

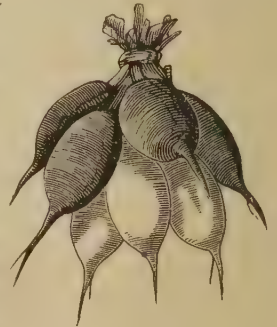


SCARLET AND WHITE TURNIP.

kind from their French neighbors, and gave it a new name, the *French Breakfast Radish*. The French name was *Scarlet Olive-Shaped with White Tip*, which describes both form and

color. There is a variety very much like this, except that it is entirely scarlet, and another called *Rose Olive-Shaped*; all about equally good, and the very best for early spring.

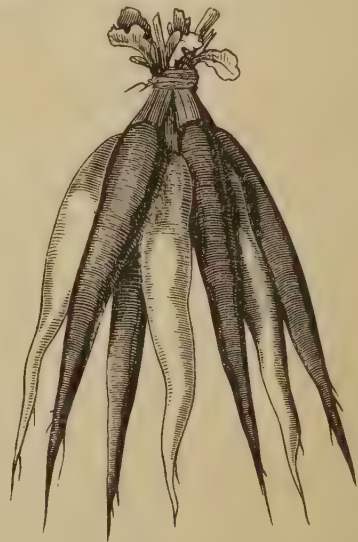
A white olive-shaped is very pretty when clear, but when stained in any way is spoiled, so far as appearance is concerned. To obtain very early Radishes I make a slight hot-bed, sow the seed in drills, then thin out as soon as they ap-



SCARLET AND WHITE OLIVE
SHAPED.

pear above ground, so that the plants will stand an inch apart in the rows, and then give plenty of air and light. If kept too close they grow all tops. A little later I make a cold frame, using a light sandy soil, and always succeed if I can give the plants plenty of air and light. Sometimes, when the weather is dark and stormy and it is not possible to give air, the plants become "drawn," that is, having long, slender tops and no bulbs, of any consequence.

After this, for later use, I make a bed in the garden, in a warm, sheltered place, and, if practicable, I obtain a load of leaf-mold from the woods. It is better than three loads of manure for growing Radishes. This I use as a



LONG SCARLET AND LONG WHITE NAPLES.

top-dressing, an inch or two deep if possible. For the out-door beds I have other kinds, the *White and Red Turnip* and the *Long Scarlet*. A white kind, the *Long White Naples*, is the best I have ever tried for very late, say mid-summer. It is white, with a green top, the green extending perhaps one-quarter its length. It grows a little curved or wavy.—TERRA.

THE BALSAM.

MR. VICK :—I was much pleased on reading the December number of the MAGAZINE to find that one of your correspondents had discovered



NATURAL.

how valuable a plant the Balsam is, and that you endorsed her good opinion. I spent the first twenty-five years of my life in a country where the summers were not sufficiently warm to mature the Balsam, and so it was grown in pots early in the spring, and transplanted to the garden about the middle of June, just as we plant out our young Geraniums and other bedding plants. Others were kept in a cool place and growing slowly, picking off the buds, until late in summer, and then they made glorious pot plants. Now I am in a cold country, also, Minnesota, but our summers are so warm, and seem to push everything so rapidly that we have no trouble in maturing the Balsam in our gardens.

However, I have not given up growing the Balsam in pots, and for this purpose I start seed the latter part of June or early in July, keep them growing moderately all the summer, and in the autumn and early winter plants are elegant. With this I send you a branch, which I hope will reach you without injury from frost, and if so you will see the flowers three times the size of those you gave in the December MAGAZINE. My plan is to prune them in various ways, sometimes to three stems, and sometimes to one, and when I desire more foliage and a larger bush I do not prune at all.

—MARY J. W.



PRUNED.



PRUNED.

high, a perfect bouquet of flowers, and double as Roses. Many bloomed a second time and

were in blossom when the frost came. I now have some blooming in my room.—M. B. D., Plainfield, N. J.

We give engravings showing the results of pruning as practiced by our correspondent.

CHURCH DECORATION.

MR. VICK :—While perusing your very interesting article on Church Decoration in the January number of the MONTHLY, I thought perhaps my own experience in that line might be of use to some of your readers, particularly if they have been seeking information upon this subject as diligently as myself. We have for years trimmed our church for Christmas, using about twelve hundred feet of Hemlock wreathing, and at Easter brought our floral offerings, made up into mounds, baskets, wreaths, anchors, crosses, and various other devices. Last year, Easter being late in April, several of us who have flower gardens kept up the decoration through the summer, distributing the flowers among the sick of the parish at the close of the Sabbath evening service.

When the cool evenings began to warn us that our harvest time was waning, we planned other methods of beautifying our church, and it is of this I wish to tell you. A large basket of Ferns was gathered and pressed; also about three hundred autumn leaves, these being varnished. Three baskets of ground or running Pine, one of Bitter-sweet berries, one of moss, and three sheaves of grain—one each of Wheat, Rye, and Oats, three wooden crosses, four florist's baskets—one large and three small,—some triangles, and a pail of sand; these were our materials for working.

Over the communion table, which is about twelve feet back in the chancel, was placed two small sheaves of Wheat and Oats, in the form of an X, tied with a dark-blue ribbon, matching in color the stained glass in the window against which they were hung. Above was a sickle, fastened with a bow of the same ribbon, and below was a triangle covered with Pine and dotted with berries; on the right and left were six-point stars, or stars made of two triangles and wound with Ferns. The font was heavily draped with ground Pine made into wreaths, and a pyramid formed on top by first placing on it a deep barrel-lid two feet in diameter, then a ten-inch flower pot, then another lid, then a six-inch flower pot; the whole was then filled with wet sand, covered with moss, and dotted with autumn leaves, scarlet berries and Ferns; the top was surmounted by a cross of gray moss wreathed with Pine and Bitter-sweet. At the side of the font was a mound of Ferns, out of which arose a cross of Wheat ears.

Slips of newspaper four inches wide were folded into one, autumn leaves and Pine were sewed on in flat wreathing, making beautiful trimming for the pulpit and reading desk. These festoons were caught up with small bouquets of Ferns and berries.

The baskets, though last, were by no means the least part of the decoration. They were covered with grain and autumn leaves, fastened on with fine cord, draped with Oats and Ferns, then filled with luscious fruit. Out of the center of the largest basket arose a miniature sheaf of Wheat, the heads of which, drooping, disclosed an ear of golden corn. This basket occupied one side of the pulpit, while on the other a white vase held a lovely bouquet of Maiden-hair Ferns and scarlet Sumac. A white cross wreathed with brilliant autumn leaves was placed upon the reading desk, a basket hung in the arch made by the wreathing in front, while of the two remaining, one occupied the front of the pulpit, and the other the foot of the font. The blending of colors, the brilliant autumn leaves and berries with the green Pine and golden grain, produced an effect both striking and beautiful, and was thought to be much superior to anything we had ever had. This was not intended for a Harvest Home, but a permanent decoration, and was not removed until the Christmas greens were hung.

Is it not wonderful, Mr. VICK, what a little energy and a willing pair of hands can do, not only in beautifying the place of worship, but one's own home? I should like very much to introduce my sitting-room to you. It is a bower of beauty, made so by Ferns, natural flowers dried in sand, and living plants. I have an English Ivy whose branches measure forty-six yards. Before closing, allow me to acknowledge the pleasure I experience from the perusal of your ILLUSTRATED MAGAZINE. It makes when bound, a nice and instructive book, and at little cost.—MRS. C. M. W., *Pittston, Pa.*

EARLY CORN.

MR. J. VICK:—I write to say that my Early Minnesota Corn was unusually good last season. I planted April 30th. It was in silk July 10th, and I picked green corn the 27th, which was inside of sixty days, and but for the frosts of May it would have been ready by the 18th, I think. It may be of interest for you to insert my plan of hastening my corn to maturity, which does not harm but increases the size of the ears. It is as follows:

Let the conditions of the soil and manure be the best you can command, and aside from the frequent weeding and hoeing stirring the ground thoroughly; thin the stalks to three or

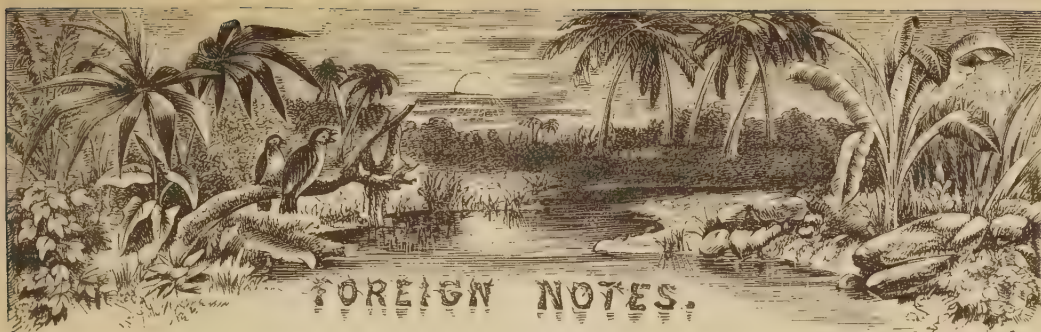
four, three is best if you would have the largest ears and most of them. Pluck out unmercifully every sucker and non-bearing stalk—that process alone will hasten your corn a week or ten days, as I have come to believe from experiment. I have added this year a top-dressing at the hill, when the Corn was well up—a compost of one part plaster, two parts ashes, and two parts fine manure, which, I think, has been a great advantage.—J. D. R., *Springwater, N. Y.*

A FINE OLD CAMPANULA.

MR. VICK:—I send you with this a photograph of a very fine Campanula I have had for sometime. It blooms most abundantly, and the flowers are not tubular, like our common one, but more open and somewhat star-shaped. I do not see it now in cultivation. It is a real beauty that I think your readers would like to know about.—CORDELIA.

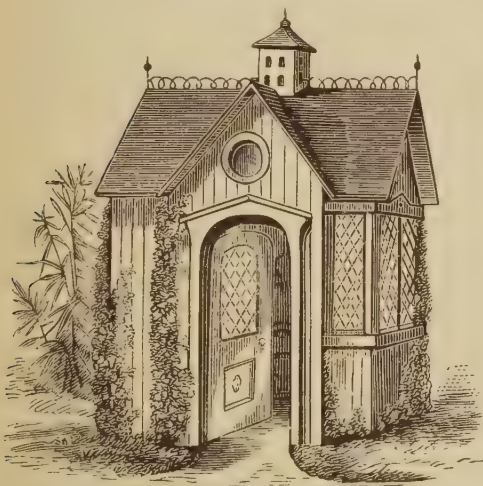


The Campanula in possession of our correspondent is, we think, *C. pyramidalis*, as the description not only agrees with our recollection of this flower, but the photograph is very nearly like a picture of this old variety that we have had in our possession nearly a quarter of a century.



ROCKERIES AND GARDEN HOUSES.

The English people, I noticed, have a great predilection for rockeries and garden houses, and considerable taste and ingenuity is sometimes displayed in their adornment. Very frequently the better class of streets are laid out in terraces; that is, two or three story brick houses in a row on one side of the street, and the corresponding lots on the opposite side are made into little gardens, and all uniformly fenced in and divided off with neat iron railings. In these gardens the occupants of the



GARDEN HOUSE.

terrace spend a good share of their leisure time, cultivating flowers and flowering shrubs.

The usual plan is to have a lawn with circular and other forms of flower beds on it, according to the taste or patience of the owner, and with thick shrubbery all along the inside of the front fence, designed in a measure to secure privacy. On one side of the lawn a straight walk leads from the gate to the rear of the lot, while on the other side, against the division fence, the rockery is generally placed, though sometimes it is placed at the back of the garden. The garden house is always in the rear of the lot, farthest away from the street; and here the stay-at-home Englishman takes solid comfort, here he smokes his pipe of peace; here, too, the

good lady of the house brings her crochet-work while the children gambol about on the green lawn, now and then interesting themselves with the beautiful flowers; and it is here, also, that the nurse-maid gives the baby an airing. This little garden,—thirty by one hundred feet, perhaps,—is really quite an institution, and the scene of many happy hours.

I have already intimated that these little places exhibit considerable taste. The garden or summer-house, as it is often called, may be six or eight feet across, sometimes square and sometimes octagonal, or round, and having a neat glass door with windows on either side. Being built of wood, the finish is often very elaborate; but the best, and that which most frequently prevails, is to have it almost hidden under a mass of Roses, Ivy, and other climbing vines. We might step inside and note the furnishing, but



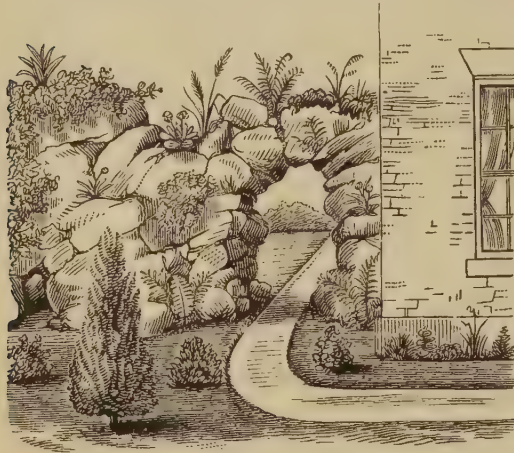
GARDEN HOUSE.



CIRCULAR ROCKERY.

it may be the young lady of the house is there with her company,—her cousin, perhaps,—so we will pass on to the rockery near by; and there amid rocks of varied form we observe a

very elegant display of Ferns, Lobelias, Portulacas, dwarf Tropæolums, ornamental grasses, and the like. Some houses, restricted to small garden patches in front, build their rockeries on the side of the house, sometimes raising them high enough to form a complete screen to the back part of the premises, with an open space or passage to pass through to the side door. This style of rockery is the most difficult



ROCKERY AT SIDE OF HOUSE.

to manage, in order to secure naturalness without looking too heavy, and yet avoid the appearance of the place being merely walled up roughly.

When viewed from the street, these uniform square lots, cased in with such an unvarying sameness of iron railing, gives the whole an air of ungenial stiffness, and makes you long to see the American plan of open lawns adopted. Once inside the fence, however, you become conscious of a feeling of charming retirement such as could not be realized by our American methods.—WALTON.

VICK'S CRITERION TOMATO IN ENGLAND.

Some years ago we grew a new and entirely distinct Tomato, and sent it for trial to the Royal Horticultural Society of England. It was awarded a first-class certificate, and soon began to attract attention. One of our English friends asked the privilege of naming it, and called it accordingly *Vick's Criterion*. We have not published anything regarding it in this country, or advertised it in any way until the present year, although having it in our possession six or seven years. We did not think it to have sufficient merit over other known kinds to warrant its introduction, though a dozen less worthy sorts while we have quietly held this have been puffed into brief notoriety. Last winter there was such a demand for seed in Europe that we sent across the ocean all we had. This variety seems to be rapidly increas-

ing in popularity in the old country. EDWARD LUCKHURST in the last number of the *Journal of Horticulture*, of London, says:

"Vicks Criterion Tomato proves to be a real acquisition. It is a strong grower and bears abundant clusters of large round fruit, most of it without any indentures, and of a peculiar crimson hue when ripe that renders it distinct from all other Tomatoes. The first batch of plants of it have been in bearing for quite four months, and were so satisfactory that next season preference will be given it for the general crop, with a few Orangefields for early fruit."

CANNAS WITH GLADIOLI.—One of the specialties of the Paris flower markets from the middle of July onward, is a combination of Cannas and Gladioli in pots. A strong clump of bronzy-leaved Canna is potted with one or two bulbs of Gladioli, the variety *Brenchleyensis* being the favorite. The pots are brought to the markets in considerable numbers and look remarkably well, the ample leafage of the Cannas setting off the scarlet flowers to great advantage. Occasionally we see in the same pot the bold leaves and striking flowers of the Canna with those of the Gladiolus; but, generally speaking, the flowers of the Canna are pinched out before they open.—*Gardeners' Magazine*.

DEATH OF A BOTANIST.—MR. NICHOLAS HAAGE, of the celebrated seed firm of HAAGE & SCHMIDT, of Erfurt, Prussia, was killed last autumn while on a botanical excursion in Switzerland, by falling from the rocks. Mr. THOS. MEEHAN, of the *Gardeners' Monthly*, writes:—"Mr. HAAGE, when a young man, was a student in the Royal Botanic Garden, Regent's Park, at London, when the writer of this first made his acquaintance, and admired him for his zealous enthusiasm in the cause of botany and horticulture; and there is perhaps no better evidence of his strength of character than in the building up of the well-known and influential firm of which he was the senior partner."

ENGLAND.—The Holly Berry crop in this section is good. I wonder if the bees did it? I saw a Marechal Niel Rose yesterday, plucked from a bush in the garden. Baldwin apples are now selling here at from ten shillings to fourteen shillings a barrel, but at this price half are rotten. Nice sound Baldwins sell at from fifteen to twenty shillings, or \$5.00 very fair quality.—HALL, Derby, Eng.

"Teach botany, that inexhaustible, tranquil, ever-interesting science, that attaches the mind to nature with bonds of flowers."—RICHTER.



A LITTLE HUMBUG.

A gentleman, of Portsmouth, N. H., sends us a letter containing several clippings from a newspaper, denouncing a fraud perpetrated upon the people by a person who claimed to be from Texas, and who had, at great labor and expense, procured from that fertile land seeds of a plant alike wonderful for its usefulness and beauty, and known to himself and other scientific men as *Tualooloo*. Of course, with such a recommendation, and such a name, sales were abundant, and among the purchasers was a well-known editor, whom we would be afraid to name, because we could never hope to be forgiven. The fruit of this wonderful seed was a small crop of poor Beets, and the editor declared, in his haste, that the vender was a *Dead Beet*; but why dead we cannot understand, for we presume no one killed him, and that he is still alive and flourishing.

But, really, when will people learn that honest, earnest scientific men have traveled almost every foot of ground in the civilized world, and nearly every mile of the inhabitable portion of the globe in search of new plants, and that very little remains to be discovered, and that little will not be found and peddled through the streets by men whose ignorance is only equaled by their impudence.

POST-OFFICE MANAGEMENT.

If people suppose our Post-office Department is managed with anything like business ability, or that the Post-office laws passed by Congress are such as any set of men outside of a lunatic asylum would be likely to pass, they are very much mistaken. If they imagine that the complicated laws of Congress are such as can by any possibility be understood, or that any two postmasters will interpret alike, they are also at fault. When is added to these muddy and complicated laws the prolific rulings of the Postmaster-General, or his assistants, the matter becomes involved in an impenetrable fog.

Let us look at the absurdities inflicted upon the country by Congress and the Department.

Canadian merchants are permitted to send any merchandise through the American mails at *four cents a pound*, while American merchants are compelled to pay four times this sum, or *sixteen cents a pound*. The effect of this law is to exclude American merchandise from the mails, except for long distances, for no merchant will pay sixteen cents a pound for carrying goods while the express companies will do the work for one-fourth this price. Of course, therefore, the Government does only the most unprofitable work, while with a reasonable charge for postage, say eight cents a pound, the Postal Department could do nearly all the carrying of light packages, and add millions to its revenue without materially increasing the expense. And yet, we understand, the Postmaster-General has made a proposition to Congress to increase the rate of postage on this class of matter. If the Postal Department was conducted with one tithe the enterprise and ability of the express companies, we think the Department would be self-sustaining, if not profitable.

FEATHERED CELOSIA AS A POT PLANT.

Mrs. GOODALE, of Whitehall, N. Y., grew, last spring, in a hot bed, a number of Feathered Celosia plants, and when transplanting them to the garden planted one in a pot. It has made an excellent plant, a wonder of beauty, and is admired by everybody. All of which, from our own experience, we can most readily believe. The only objection we ever had to this elegant plant is the fact that its beauty is not fully developed until autumn, and it is cut down by frost when in its greatest glory. As a pot plant it is exceedingly brilliant. We gave a colored plate of this plant in the May number of the MAGAZINE for last year.

A PRIZE.—We have an order to supply our MAGAZINE to a young lady of Port Huron, Michigan, as a prize won in archery. This is a novel, but quite an acceptable prize. So the ladies say.

FLOWER PREMIUMS.

JAMES VICK:—The Agricultural Fairs throughout this part of the country have been offering about the same premiums on flowers and plants, but, generally, only the greenhouse men have articles on exhibition. I enclose a slip from the premium list of the fair held at this place. It is not a county fair. I desire to get up a list, not for greenhouse men, but one which will give more encouragement to ladies who grow plants in their gardens, and bring out the same to the fair, (they always complain of being crowded out by professionals,) and am somewhat puzzled about it. Thinking that perhaps others might be benefited by your experience in this, as they have been in so many other instances, I would like very much to see, at an early day, in one of your MAGAZINES, a good list of articles which would come at the proper season—the last of September and first of October—for fair exhibits.

Since our fair was started—six years ago—the ladies of the village have taken quite a fancy to growing flowers, which has increased from almost nothing at the beginning, till last summer nearly every yard had some flowers, and some of them splendid flower gardens; but about all they compete for at the fair are Dahlias, Pansies, hanging-baskets, Verbenas and bouquets—the aforesaid greenhouse men carrying away all other premiums.—D. W., *Minerva*, O.

As many others experience the difficulties suggested by our correspondent, we publish the above for the general good, and would suggest as one remedy, two lists of premiums—one for amateurs and another for professionals, meaning by the latter those who depend upon this work for a livelihood. The premiums for the latter class need not be large or expensive, for their principal object is to advertise their goods and talk about them to the people. A diploma, and a word of recommendation published in the village paper, will generally be satisfactory.

In arranging premiums for amateurs, regard must be had to the flowers in season about the last of September. Very few persons have good pot plants at that time, so these may be omitted in the amateur list. In the first place, we would suggest a premium for the best collection of cut flowers. This will be apt to call out a large display, and yet almost every one will know before the fair commences that one of two or three persons, who have good taste and large gardens, are sure to obtain that prize. The next point is to provide for the encouragement of beginners, and arrange the balance of the premiums so that this class can have a chance. We will suggest a prize for the best six Dahlias, best six Gladioli, best show of Asters, Phlox Drumondii, Foliage Plants, (as Coleus, &c.—cut branches and not whole plants), Geraniums, Pansies, Petunias, Everlastings, Ornamental Grasses, and three best Lilies. Something like this, we think, will meet the necessities of our correspondent. In addition to these prizes, it may be well to offer something for best table ornament, best hand bouquet, and best three button-hole bouquets.

PAMPAS GRASS.

Are there several species or varieties of Pampas? I have had a plant three or four years which I purchased as Pampas Grass. This season it threw up about a dozen stalks from eight to ten feet high, but instead of the large silvery plumes which were looked for, they bore small, dark colored heads not more than six or eight inches long by one or one and one-half inches in diameter, without beauty, either in form or color. The plant itself is ornamental, grows vigorously, and endures our winters well with protection of straw or frame. The leaves, which are about five feet in length, have a narrow white stripe on the upper surface, running longitudinally through the center. It has been suggested that this plant (and others like it in this city) are of a different species from that which bears the plumes. There are plants in this State, (Massachusetts,) and in Rhode Island that produce very satisfactory plumes under the same treatment that mine receives.—W.

We rather think our correspondent and others are growing the *Erianthus Ravennæ*, and not the Pampas Grass. There is some variation in the Pampas, and we noticed this more particularly in California; but we never saw or heard of any that answered to the description given above. When in California we were informed of Pampas growing near San Jose, that bore fine drooping plumes, but did not see them.

English Measures.—I notice in English market reports measures of which I have no knowledge, such as *punnets*, *hands*, *sieves*, etc. I am therefore unable to tell anything about the prices of fruits and vegetables in the English markets. I think perhaps others of your readers would be interested to know what these names mean.—J. B. W.

The measures used in the markets are generally of wicker-work, though they are sometimes made of material something like our cheapest market baskets. *Punnets* are of different sizes, according to what they are to contain, as *Radish punnets*, *Mushroom punnets*, etc. They are round baskets, for Radishes and Sea Kale about eight inches in diameter at the top, seven at the bottom, and two inches deep. For Mushrooms, Salads, etc., they are smaller. A *sieve* holds about seven gallons, and is about sixteen inches in diameter and eight inches deep. A *Pottle* is a conical basket, holding about a quart. A *Hand* means a bunch, as a bunch of Radishes.

Pancratium.—Will you please tell me through your MAGAZINE whether *Pancratium Mexicanum* can be made to bloom. I have had one four years, and the directions said treat as a Calla Lily. But there are so many ways of treating Callas. I have tried several with the *Pancratium*. I kept it setting in water all one year, and have tried watering with warm water. I planted it in black muck from a swamp, and have had meadow soil and sand, but all to no purpose; I can't make it bloom. It was sent me from Texas, and I would like to know if it is worth keeping any longer.—READER, London, O.

We would take the bulb out of the pot and allow it to dry, placing it on a shelf in a warm room, and thus keep it two months. After this treatment we think it would flower.

VITALITY OF GARDEN SEEDS.

A lady of Olney, Ill., wishes to know how long the different kinds of garden seeds retain their vitality, because sometimes seeds are kept over, and there is great doubt whether they should be planted or thrown away. This question is difficult to answer, for so much depends upon circumstances. If onion seed, for instance, is well matured and ripened in a favorable season it will retain its vitality two years, but if the season has been unfavorable it is entirely worthless the second year.

A good deal depends, also, upon the manner in which the seed has been kept. Vitality is best preserved in rooms that are perfectly dry and well aired. Seeds that will not keep in our seed houses, where we clean our seeds, or in the store-rooms and work-shops attached to our propagating houses, are well preserved in our seed-lofts. Our rule is to test everything in the autumn, or before selling and planting time, and this our readers can do very readily. Select fifty seeds and grow them in a pot, which must be kept in a warm place. Light is not important, but the soil must be constantly warm and moist. In a few days plants will appear, and the percentage that grow can be readily ascertained. Seedsmen have a more expeditious way, but this is simple and good enough. Among all the common vegetables there is but one that is surely worthless the second year, the parsnip. Some kinds are doubtful, and others are certainly good.

PLANTS FOR SHADE.—It is quite difficult to obtain flowers without some sunshine. Two hours a day of sunshine will give life enough to many plants to insure flowers. This we might as well acknowledge and act accordingly; so in shady places we can have ferns, of course, and Caladiums, Cannas, and other foliage plants, and it is not best to try flowers.

Where there are two hours of sun we can have Fuchsias, Pansies, Lily of the Valley, Perennial Phloxes, Forget-me-nots, and a good many other things that succeed better in the partial shade than in the full sunshine. For such places we would especially recommend the Japan and California Lilies.

BROWALLIA AND GERANIUMS.—The prettiest flower-bed that I saw last season was a mound filled with alternate plants of blue Browallia and scarlet Geraniums.—M. C. J., *Hartsville, Pa.*

PARLOR ROCKERY.

A correspondent inquires for instructions for making a *Parlor Rockery*, having several specimens suitable for the purpose. The only way a small parlor Rockery can be made satisfactory is, we think, to combine the aquarium



and Rockery, somewhat as we have shown in the engraving. Of course, in a living room, or parlor, a good deal of sprinkling of the rocks must be done, or plants placed in the crevices will dry up. This makes a basin to catch and retain the drippings necessary, and so we would suggest a basin as shown in the engraving, of sufficient depth for gold and other fish. It can be made of any form desired, and with any ornamentation that taste may suggest.

STARTING THE FUCHSIA.

Permit me to say a few words to the lady who had such hard luck starting a Fuchsia plant. I would say to her, take a nice thrifty leaf, place it in the dirt with the plant, that it may not be forgotten, and in a few months she will see a nice little plant coming forth. I have one now that is eighteen inches high, and I have cut it back two or three times that it may branch. It is called the Mammoth, or Giant Fuchsia. My old plant is about two and one-half years from the cutting. It is in full bloom and has been for almost two years. My husband thinks there is nothing so handsome, except the Japan Lily we had of you some five or six years ago. It has bloomed every year since—a perfect success.—MRS. J. B., *Levant, Maine.*

DAHLIAS IN NEW MEXICO.—Sometimes we hear complaints of the conduct of Dahlias in the South, although it is their native home. A year since we sent GEORGE CANN, of Santa Fe, New Mexico, half a dozen tubers, and on October 3d Mr. C. wrote:—"Those Dahlias are the best I ever saw to bloom. I really believe I had on the six plants two hundred blooms open at one time. Every one that saw them said they were the best they ever saw. There are one hundred flowers open to-day."

THE AZALEA.

MR. VICK :—Please give instructions through your MONTHLY how to manage the Azalea, Cineraria and Carnation. My Carnations are plants grown from seed sown last spring. Might I not expect blossoms this winter?—A SUBSCRIBER.

Azaleas are shrubby green-house plants, and easily cultivated. In color they are white, rose, pink, lilac, scarlet and crimson. Small plants bloom well, but their beauty increases as they get age and size. They need a light soil of sandy loam, to which should be added one-half leaf mould. Re-potting should be done in May, trimming the tops to bring them into shape.



Then plunge in some sheltered spot in the garden. In September the plants should be brought in under cover, or into a cool room. They do best when the temperature ranges from forty degrees at night to sixty-five or seventy degrees by day. The foliage should be showered once a week, but care must be taken that the roots are not over-watered, as they rot quite easily. The flowers appear on the terminal shoots, and are from one inch to two and a half inches in diameter. A large plant in full bloom is a sight not easily forgotten.

For culture of Carnations see Vol. I, page 346. They do best in about the same temperature as is described above for the Azalea. The seed sown was probably the summer flowering sorts.

For the culture of the Cineraria see page 113 of Volume I.

English Ivy.—Will you please tell me through your MAGAZINE whether the English Ivy is an evergreen or not, and, when used as a house plant, will it bear freezing without injury to the foliage? I desire to obtain it for home decoration, but cannot keep it from freezing. I have never seen it growing in Illinois, but when in New Jersey, some years ago, I saw two fine plants covering both ends of a large brick house. If I remember aright, I was told it was an evergreen, but am not certain.—J. L., *Illinois*.

The Ivy is an Evergreen. It will bear a good degree of frost.

WILD FLOWERS.

In your MAGAZINE for 1878 you have given us a number of engravings and descriptions of cultivated flowers. Now, will you be so kind as to do something for the wild flowers, as we are in the habit of calling them—for there are some flowers that refuse to be tamed so that they can be cultivated in our gardens. One of the most beautiful wild flowers is the blue-fringed Gentian. When I was a boy this flower grew in abundance along the road-sides and in open places in the woods; now it is a rare sight to find one of these flowers, and the seed, which ripens late in the fall, has always refused to grow with all the care that I have taken with it. Another sweet and beautiful wild flower is the Bush Honeysuckle. This, too, is becoming a rare wild flower in our woods, and refuses to bloom when transplanted to the garden. But you may know how to tame these wild beauties, so that they will submit to our culture and reward us with their beauty and perfume, and if you cannot do this, will you give us a description and picture of these flowers, so that when they become extinct coming generations may have some idea of what wonderful wild beauties once grew in our woods.—R. J., *East Groveland, N. Y.*

The Fringed Gentian does not love civilization. It is a true wild flower. In Europe we have known some of the species to be grown by planting them in beds of stones. The soil was taken off about three inches in depth, leaving, of course, a trench. In this was placed stones about an inch apart, nearly level with the surface. In these sufficient earth was placed to fill all the crevices and leave an inch or so of earth on top. In this bed divisions of roots were planted and kept well watered the first season. After this they flourished without care. Next season, when these flowers can be procured, we will make a drawing, and present our readers with an engraving of this delicate flower.

The Honeysuckle referred to is, we presume, the Azalea nudiflora, which grows on wild, sandy hills quite abundantly. There is no difficulty in growing this in a sandy soil, free from lime, and partially shaded. It will not thrive in a limestone soil.

GOOD ADVICE.

We hope all of our numerous correspondents will write name and address quite plain, for while we can make out the name of a plant or almost anything of the kind, no matter how written, it is sometimes difficult to decipher names and places. But good plain writing is a virtue everywhere, and we always thought ourselves to be in possession of at least a fair share of this virtue; but a correspondent seems to think very differently. After we had written and answered five questions of no interest to us, and prepaid postage, the mail brought the following reply:

J. VICK :—*Sir* :—Do you Call This plain Riteing For I Can not Read it i Will Try Some other person a Little Advise

When you Do a Thing Do it Well This Thing is no use To me.—F. NEWTON.

LILY OF THE VALLEY.

MR. VICK :—As my mother has a pot of the Double Lily of the Valley in full bloom, I was admiring it and said that I wished Mr. VICK could see it, as I have never seen it mentioned in your MAGAZINE. Mother said I must send you one with the compliments of the season, and thank you for the last number of the GUIDE, which I received a few days ago and enjoy very much.—MRS. E. M. L., *Plattsburgh, N. Y.*

MR. VICK :—At the home of one of my friends I saw a pot of the delicate Lily of the Valley. I understand they had been planted only a few weeks; that they can be planted almost any time during the winter, and thus a succession can be kept up a long time. I have also heard that the cost is not very much. Please tell your readers all about this winter treatment of the Lily of the Valley, for I know it will be new and interesting to most of us.—ELLEN M. T.

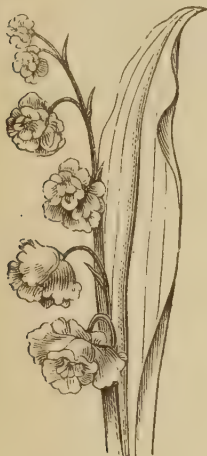
The Lily of the Valley, we all know, is a sweet little flower, but all are not acquainted

with its winter management, and how cheerfully it yields its flowers, and only asks the simplest treatment. Florists now grow what are called *Pips*, that is, little roots with a flowering bud growing from it, as shown in the little engraving. They can be bought for about sixty cents a dozen, or rather, they are sent all all over the country by mail, free of postage, at that price. These

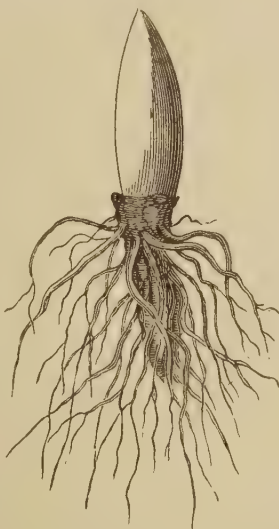
flowering buds are not injured by frost; indeed, they are rather benefited

by a good freeze, and so can be sent at any time. When received, plant from three to half a dozen in a pot, and keep the balance in any

cold place, covered with damp moss or sawdust, when they will remain dormant. Place the pots of plants in a warm place, and keep the soil always moist. If in the dark, just as well for a week or so. Then bring them to the light. In three or four weeks the flowers will be produced. Wait about ten days and then make another potting. These buds, or pips, will flower in damp moss and sand, and we have often grown them in boxes by the



DOUBLE FLOWERS.



FLOWERING PIP.

dozen, removing them to fancy pots about as they were coming into flower. Indeed they can be flowered in moss about as well as in



POT OF PLANTS IN FLOWER.

earth, and may be moved to glasses of water, and be handled in almost any way to suit the convenience of the grower, at the time of flowering.

We thank our correspondent for flowers of the Double variety, but do not think any tubular or bell-shaped flower is benefited by becoming double. The double *Campanula Medium* is a good flower spoiled.

A GOOD CROP OF ONIONS IN MISSOURI.—JAMES H. RUSSELL, of Buffalo, Mo., writes: "I sowed two acres with Onion seed, and had a splendid yield—250 bushels to the acre. I also sowed half an acre thick for sets, and harvested seventy-five bushels, so you see I had some fine crops of Onions, and a very rich reward for the expense and labor."

CANNAS.

MR. VICK :—Will you please tell us about Cannas in your MAGAZINE soon. I had six sent me last spring, and they grew splendidly during the summer. Can I divide them in the spring, or must I have the roots just as large as they are.—J. L. H., *Bellville, N. Y.*

The Canna roots you can divide or plant as they were taken up. As a general rule it is better to divide them, but occasionally, where a thick clump is desirable for the center of a bed, or as a screen, we have observed very fine effects by planting the roots just as taken from the ground the previous season. We are also reminded that we said nothing about the culture of Cannas during last year. Very few, if any, of our large-leaved plants are equal to the



Canna in forming large ornamental beds of foliage plants. The leaves are sometimes two feet in length, of a beautiful green, some varieties tinted with red. The flowers are on spikes, pretty, but not conspicuous. Roots can be taken up in the autumn and placed in the cellar. They flourish and are vigorous in the dryest and hottest weather. A bed of Cannas presents a very beautiful tropical appearance that is exceedingly pleasant, contrasting delightfully with the ordinary foliage of the garden. In the West Indies a superior kind of arrow-root is made from the fleshy underground stems; the tubers of some species are eaten as a vegetable. The seeds are quite large, round and black, which gives it its common name, Indian Shot.

COLD FRAME.

MR. VICK :—Will you be kind enough to give me some directions in regard to the management of a cold frame? I had a frame made and planted seeds in it, but they did not make strong plants; the plants were really behind those that were planted in the open ground later. I should like to know what the temperature should be, whether the glass should be whitewashed, whether the frame should be shaded, and how early the seeds should be sown in it. If you can give me these directions you will greatly oblige an old customer.—M. C. H., *Jamaica Plain, N. Y.*

A cold frame, of course, has no bottom heat, and the advantage is protection from cold air. The air in the frame, being partially confined, becomes warmed by the sun. A cold frame should be placed in a sheltered place, and the soil must be warm and light, that is, containing a good deal of sand. The temperature during the day may go up to sixty, or a little over, and when the sun shines, shade is required, or the plants are apt to burn. A little dust thrown on the glass will answer; and unless too hot, a little air will suffice. This can be procured by raising the sashes a little. In doing this we must remember that plants are just as apt to take cold as people, and a good deal of mischief is often done by a cold draught. Plants after a sunny day often suffer during cold nights. The air in the frame becomes, of course, quite cold before morning. To prevent this, cover the frames with mats, straw or carpeting. The time to start a cold frame depends upon the season. If too early, the plants will perish with cold. A good deal must be learned by observation and experience.

Winter Fuchsias, &c.—MR. VICK :—That I subscribe for your MAGAZINE again is proof enough that I think very much of it, without any other words of praise for it. And now may I ask you a few questions. Does the Cyclamen deteriorate, as the Hyacinth does? Do Fuchsias require a rich soil to procure an abundance of blossoms? I fail in bringing any into blossom during the winter, although flowering well through the summer. Will you not give us a chapter on the culture of the Fuchsia, and also a colored plate of the same.—MRS. A. J., *Pittsfield, Ill.*

The Cyclamen does not necessarily deteriorate. With proper change of soil occasionally, it will keep in good condition. There are only a few varieties of Fuchsias that will flower well in the winter, among them the best are *Speciosa*, *Brilliant*, and *Carl Halt*. Other sorts flower in early spring, and remarkably well all summer, in shady places. During the year we will prepare a colored plate of Fuchsias.

Squash Bug.—Have you any remedy for exterminating the large black bug that infests the Squash vines? Will you be kind enough to let me know, if you have?—M. E. C., *Waverly, N. Y.*

The only way we know is to destroy them by hand, making diligent search on the under sides of the leaves for the eggs.

ADONIS.

Will you please tell me the name of the dry flower I send you, enclosed between card board, in this letter. I gathered it in a neighbor's garden last summer. I thought the plant very pretty, as the flowers were very bright red, and the leaves, certainly, were very pretty. I think it is an annual, but don't know, nor could I get any information, as the owner had become somewhat "mixed," or his flowers had.—M. E. W.

The flower received with the above is the Adonis. It is an annual, of very prettily-cut foliage, while the flowers are of an intensely



deep red, almost blood-red, and cup-shaped. The legend is that this flower sprang from the blood of Adonis, when he was wounded by the boar. It will grow well and flower under the shade of trees. A clump under a tree, or in a shady corner of the garden, around a rustic summer house, makes a very pretty appearance. In this case, as in most others, we prefer to give an illustration, which will afford a better idea of the plant than any lengthy description. The



plant grows about two feet in height, the flower less than an inch across. The flower and foliage is shown of nearly natural size.

FIRE CRACKER PLANT.

Will you please give me the name of the flower I send you with this. I gathered it last summer in California. It grows in clusters, or heads, containing twenty or thirty, or more, flowers, the whole head being, when fresh, I think, about six inches across, and each flower more than an inch in length, and red, particularly bright at the mouth.—FOURIST.

The flower described by our correspondent is one of the most curious and interesting of California plants, and is called Fire Cracker Flower, but its true name is *Brodiaea coccinea*. The flowers are a little larger than Chinese fire-crackers, nearly the same shape and color, though the scarlet is more brilliant. The clusters are very large, and if our recollection is not at fault, we measured them eight inches



across, and at a distance the resemblance to a pendant bunch of fire-crackers is certainly very striking. The bulb grows deep in the ground, as do nearly all the California bulbs. The flowers retain their bright color for a long time, after every particle of moisture is dried out, and we have had them of good color six months after being gathered. From forty to fifty flowers are often found on a single stalk. The root is edible and sought for by the Indians, and abounds in a mucilaginous or starchy substance, very apparent when a bulb is only slightly bruised. The *Brodiaea* belongs to the Lily family, and is found mainly along the northern coast of California, on the tops of the mountains, in gravelly and rocky soils, in open woods, among Oaks and Conifers.

DESTROY MOLES.—A correspondent wished to know what would destroy moles. Take a little flour and water and make into dough, sweeten with sugar. Into a piece of dough about the size a hen's egg put as much arsenic as will lay on a ten-cent piece; make into pills about the size of a large pea, and put into their running-places, and the moles will very soon disappear from your garden. — MRS. S. R., Pittsfield, Ill.

LILIUM RUBRUM WITH WHITE FLOWERS.—I. H. KRELAGE, of Haarlem, Holland, writes to the London *Garden* that in a garden near Amsterdam, a Rubrum Lily bore *nine* flowers, four being white, and the other five of the usual red color.

THE ARUM.

In a recent number of your MAGAZINE an article appeared on the "Dragon" Arum, its blooms, &c. Summer before last I purchased one bulb each of the four kinds usually grown, and last season two kinds bloomed finely. The "Dragon" especially, was large and nicely colored, resembling a large curled, bright-colored Begonia leaf, and attracted the attention of all visitors. Of course, there was that "awful" fragrance, which was a serious objection to a close examination of the flower; yet we exercised forbearance, and looked and wondered. Finally, I intended to take it to the store for further display; but before doing so I cut out the long, dark spike which rises in the center, and gave it a farewell fling over the fence. Then, upon investigating further, I suddenly found that the *perfume had accompanied the spike* into the street, very much to our satisfaction. Therefore, I am of the opinion that this peculiar fragrance is emitted by said spike or center piece. It would be well for your readers to make a note of this, and see if their experience will verify this statement.—J. M. McC., *Butler, Mo.*

A SENSIBLE WOMAN.—One storekeeper, in Portage, Wis., has a very sensible wife. She has a very poor idea of seeds left at the country stores, *for sale*, and nothing else. The lady writes:—"My husband trades in flower seeds, but I have planted so many and failed that I do not patronize him, nor shall I until he gets good seeds. I must not fail to tell you of the *double* Portulaca, which came up beautifully after I wrote you they proved to be single. I planted them in earth in which single Portulaca had been, and, of course, the single got ahead of the double, but afterward the double came and bore just like Roses." How often in this way the seedsman is blamed for selling seeds that produce weeds, when a little thought and patience would have shown a very different state of things.

A LARGE IVY.—I suspect it will not be amiss when I inform you that the English Ivy I bought of you some three years ago now decorates our parlor to the length of 200 feet!—the envy of all the ladies and the admiration of the town. It twines around every picture frame, and is decorated with Maple leaves and Bittersweet berries by my daughters, and is a sight. I have about 100 plants in the room, and Geraniums, Lilies, Heliotrope, &c., are all in luxuriant blossom. Double windows are a power here as well as in Canada.—T. H., *Junction City, Kan.*

THE CURCULIO.—A correspondent, of Bloomington, Ill., inquires at what season the Curculio stop stinging the plums, and how its injury may be prevented. The Curculio commences stinging the fruit when it is quite small, but the effect is not seen until the egg becomes a worm and commences feeding, soon after which the fruit falls to the ground. We know of no remedy, except jarring the trees early in the morning, when the insects are somewhat dull, and causing them to fall into cloths provided for the purpose, and killing them. Also, destroying all fallen fruit. They are not as destructive here as formerly.

PANSIES IN WEST VIRGINIA.—Our readers will remember how often we have recommended the Pansy as one of the best flowers for winter and early spring in the South. We have had very many reports of success with this flower, from the South and South-West, that we have filed, perhaps for future use. Among others of a somewhat similar character we found, written in April last, a note from SAMUEL LAUGHLIN, of Wheeling, W. Va., stating that in a bed six feet in width and thirty feet in length, he had a thousand plants in bloom. There were nineteen distinct varieties and none less than an inch and a half in diameter, and many of them were two inches.

NICE FLOWERS.—I must say, without bragging, that I have the nicest flowers in the whole neighborhood, and nearly everybody says that they have no luck, as I have. But I do not think it is good luck, but the love for the flowers and the care I take of them. As you will see by the enclosed slip, I have taken four prizes at our fair. I must thank you for this, as I have received such kindness from you. When I came to Howell, nine years ago, I was the only one that had flowers at the fair, and now there are nearly one hundred entries.—L. B.

The above is from a German friend of Howell, Mich.

LONDON PRIDE.—I see by your MONTHLY for December that a Mr. JOHN HALL has sent you plants of "London Pride," which you do not seem to know. If he has sent you the genuine thing, it will turn out to be *Saxifraga umbrosa*, for that is the true London Pride of English gardens.—A READER, *London, Eng.*

The trouble is with common names. We have several plants called *London Pride*, but the name is most commonly applied to *Lychnis Chalcidonica*, and hence it is hard to make people believe that this is not the London Pride of England and the rest of the world. In our January number for 1878 we stated the London Pride to be *Saxifraga umbrosa*, and gave illustrations of both plant and flower.

SWEET ALYSSUM.

MR. VICK:—Some time since you spoke of a number of small flowers suitable for small bouquets, but though I have not the number of the *MAGAZINE* now, having loaned it to a friend whom, I hope, will soon have a copy to loan, instead of borrowing, I think nothing was said about a very pretty little flower that, with me, is a great favorite—I mean the pretty



little Sweet Alyssum. I not only enjoy it in the parlor all the summer, but always try to have a pot in the house with Mignonette and other delicate flowers. In a pretty cool place I find no difficulty in growing the Sweet Alyssum, though some of my friends complain. I think the difficulty with them is, too much heat and too dry air.—C. A. W.

OUR PORTRAIT.

We always thought ourselves very fair looking, indeed, quite good looking. We know the ladies say so, at least a great many of them, as we have had opportunities to know; and the looking glass says so, if we are any judge, and we profess to be quite competent on this point. A miserable thing was gotten up for our Journals once, when we were away in Europe, and we have sometimes thought the photographer must have used the wrong negatives, or that the right ones became badly hybridized in some way. Now we purpose to show our correspondent who wrote the following, and all others of similar sentiments, that we have been greatly slandered, and that we are really fair looking. We shall never again try to get out two hundred thousand photographs in a few months, and thus cause remarks like the following:

MR. VICK:—I would suggest that the portrait of yourself which you are about to send out don't take the place of the usual colored plate in the *MAGAZINE*, in which most of your readers must be interested. Your pen pictures are good enough for me, and I will venture to say if you send out any other a great many will be dis-

appointed. I infer this much from a photograph in the *Floral Guide* for 1872, and I must say, in all charity, that you are not good looking, the photo. being a very pronounced type of the Irish schoolmaster of bygone days.—T. A., *Millbrook, N. Y.*

INSECTS.

MR. VICK:—I can hardly send you this without expressing my gratification at the beauty and helpfulness of your *MAGAZINE*. I hope in some future number you may be able to tell us more about our insect enemies. The past season, it seems to me, has been very prolific in these pests. My Honeysuckle was almost destroyed by a green aphid (1). In the north garden a dark, metallic-looking fly, or hopper, about a quarter of an inch in length, ate my Asters (2). A white fly, that hopped with great agility when disturbed, injured the Pansies and other flowers on the east side of the house (3). And the vines on the south of the house were infested with a, to me, very strange insect, who carried over his back a kind of plume, (for an umbrella, I suppose). This last fellow was a creeper; was oval in form and flat, with many short legs; the color of the body was greenish, but the squarish plume that he carried over him was dark (4). With the first mentioned fly and the last, I was most successful in the use of lime, sprinkled on the leaves while they were wet. My Bouvardias trouble me with a reddish, or, sometimes, whitish insect, much like the scale in size, but softer. When I turn this insect on his back, he resists as long as he can, and then waves his many legs in despair. I found them on both the leaves and stem, but particularly at the axil of the leaf. I tried smoking with tobacco week before last, and yesterday they were still as plenty as ever, so I washed them off leaf by leaf with a brush. Whether this will diminish them permanently remains to be seen.—MRS. O. M. C., *Syracuse, N. Y.*

1. The green aphid on Honeysuckles can best be destroyed by using Whale Oil Soap suds, applied with a syringe.

2. Persian Insect Powder will stop the hoppers or fleas from eating Asters—Pansies.

3. Treat the same as recommended for No. 1.

4. For the mealy bug on the Bouvardia apply a mixture of one part alcohol to three parts of water, using a camel's hair brush.

CONNECTICUT AGAINST ARKANSAS.

Mrs. K. O., of Monticello, Ark., writes that she has a *Caladium esculentum* with leaves six feet high, with a leaf measuring forty-two and a half by thirty-two inches, &c., and asks who can beat it? I can beat the *Caladium*. I am five feet ten and a half inches high, and I can walk under the leaf with my hat on without stooping or hitting my hat, and the leaf measured fifty-two and one-half inches long. I did not measure the width, and as I exhibited it at the fair here and then threw the leaf away, I cannot now get the width. I have a friend now with me from Nashville, Tenn., and he claims he has seen one twelve feet high.—E. W., *Woodbridge, Conn.*

GERANIUMS.—Our next colored plate will be a very fine one of Geraniums.



BOTANY FOR LITTLE FOLKS.

In the Pea, the change of the flower into the fruit is one with which most of us are familiar; for our anxiety to have the first taste of this toothsome vegetable in the spring keeps us on



130. Pea Fruit.

the lookout, from the time the plants peep above ground until we see the well-filled pods sent to the kitchen. We have all watched the full blown flowers and seen the petals drop away, leaving the pistil standing in the center of the calyx; day by day the pistil, or, rather, the lower part of it, the ovary, has grown in length and breadth, and gradually it has swelled out and become plump and hard, and one morning, just to see how it looks inside, we press on the lower part of the pod and it cracks open and shows us its wealth of seeds.

This, then, is the fruit of the Pea,—a pod containing several seeds. The *fruit of any plant* may be simply defined as *its seed and the vessel containing it*. In order that we may

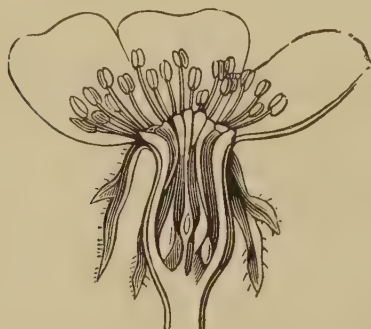
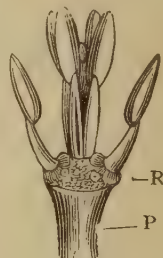


Fig. 131. Rose. Vertical Section of Flower.

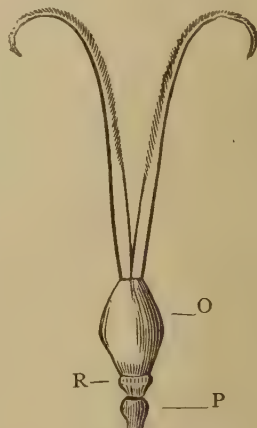
comprehend clearly the structure of different kinds of fruits, let us examine more particularly this of the Pea. The pod is composed of two parts, each of which is understood to be a transformed leaf. By a little pressure and gentle rubbing on the outside of the Pea-pod we can separate from it a thin skin, or membrane, which, when held up to the light, appears almost white or transparent; underneath this is a

thick layer of green, succulent tissue; and lastly, below this second tissue and lining the inside of the pod, is another membrane similar to the first or outer one, but thicker and firmer. Now, the structure of the leaf is precisely the same—the upper and under surfaces are distinct membranes, and between them is a layer of green, succulent tissue. In the Pea pod—the fruit of the Pea—only a slight change has taken place from the ordinary condition of a leaf. In many other fruits, although the change in form is much greater, these three essential parts as found in the leaf are readily detected, but in some the parts are so changed and unified that their distinction is lost.

Again, many fruits are materially modified by a union of other parts of the flower with the ovary, so that it is not always the ovary alone that constitutes the seed vessel, but the ovary united to one or more parts of the flower, all of which are so much changed in form and so curiously united that the several parts can be determined only by patient and skillful investigation. The examination of the structural parts of some of the commonly cultivated fruits is our present purpose; and, to do this to advantage, let us bear in



132. Wallflower.
R, Receptacle.
P, Peduncle.



133. Dianthus. Peduncle, P, mind the facts already supporting Receptacle, R, and Ovary, O.

pistil is a transformed leaf, but retaining the characteristics of its original organization as a leaf, namely: three layers, the upper or outside layer, the under or inside layer, and the inner or middle layer. We have already

learned that the name given to the ripened ovary or seed-vessel is the *pericarp*; this name comes from the Greek word *karpos*, a fruit. The names of the three parts of the pericarp are as follows: the outside layer is called the

epicarp,—*epi* means *upon* or *uppermost*, and is therefore given to the outside layer that is over or upon the others; the inside layer is called the *endocarp*, because *en* or *endo* means *in* or *within*; and the middle layer is called *mesocarp* because *meso* or *mesos* means *middle*. Hereafter, these several parts of the ripened ovary or pericarp will be referred to by the use of



Fig. 134. Rose. Fruit or Hip.

their appropriate names, as just explained.

The flower of the Rose is peculiar and its structure has been previously explained, but we now introduce it again to illustrate, in connection with it, the formation of some kinds of fruits. As will be noticed in *fig. 131*, the receptacle, instead of being, as in many flowers, a small, flat or rounded body at the end of the flower-stem or peduncle, is shaped something like an urn; that this may be fully understood, let us look at the receptacles of some other flowers, for instance that of the Wallflower, *fig. 132*. Here the receptacle is seen to be the end of the flower-stem or peduncle enlarged; the sides taper gradually to the top, which is flattish, much smaller than the base, and is crowned by four of the stamens and the pistil.

The receptacle of the Dianthus, *fig. 133*, has somewhat the same shape as that of the Wallflower, only inverted in position, for its base standing on the end of the peduncle is small, and its edges gradually swell out toward the top, which is much larger than the base. The ovary is seated directly on the top of the receptacle. Now let us



Fig. 135. Quince. Section of Flower.

suppose we have a bit of soft clay that we can at will mould into the shape of the receptacle of the Wallflower, or into that of the Dianthus, how easy it would be to press down at the top, push out the sides and draw them up, as the potter hollows out a vessel, and thus form such a hollow, urn-like body as we see in the Rose.

This hollow vessel, then, is the receptacle of the Rose, and the bottom of the inside of it corresponds to the top of the receptacle of the Wallflower and the Dianthus; and as in these latter the ovaries are seated on the summits of the receptacles, so the ovaries of the Rose are correspondingly situated at the bottom of the inside of its receptacle. Thus it appears that

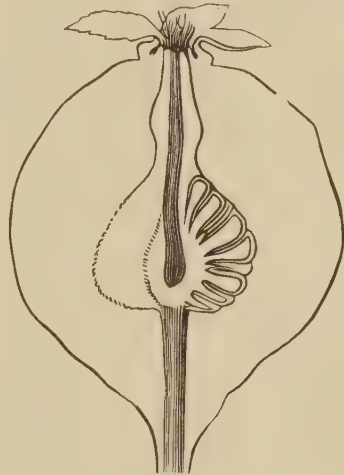


Fig. 136. Quince. Section of Fruit.

the relative positions of the organs mentioned are the same in each of these flowers, although they are so different in form.

"All shapes are similar, yet all unlike,
The chorus thus a hidden law reveals."

As the flower of the Rose withers, the petals drop off, the styles and the stigmas dry up, the ovaries harden and become little bony nuts at the bottom and lower parts of the sides of the tube, the mouth of the tube or urn contracts,



Fig. 137. Pear. Section of Fruit.

the sepals straighten up, and there is the little fruit, which, as it ripens in the sun, becomes a bright scarlet in color. The Rose fruit is commonly called a hip. Strictly or scientifically the true fruit of the Rose consists of the little bony nuts lying inside and at the bottom of the

hip, for these are the ripened ovaries; as we took the Pea at the outset as our model, and found that the pod was the mature ovary and called that and the enclosed seeds the fruit, so

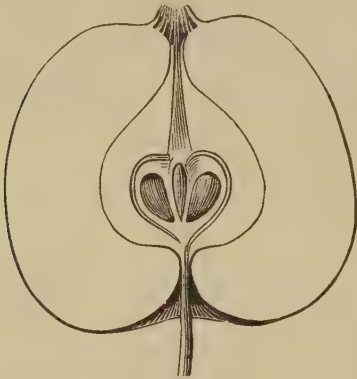


Fig. 138. Apple. Section of Fruit.

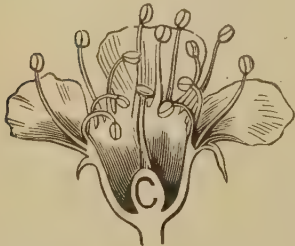
we find the seed of the Rose enclosed in a little bony nut, which is therefore the true fruit. In popular language the fruit is the whole body that encloses the seeds, and so we wish to consider it. In this case, the body of the fruit is the enlarged receptacle; as the receptacle is



Fig. 139. Strawberry.

only a prolongation of the flower-stem, the fruit or hip is really the end of the flower-stem, enlarged and fashioned into a hollow oval body. The flower of the Quince is shown at *fig. 135*, and its resemblance to that of the Rose is so plain that it is unnecessary now to trace out, one by one, the points of similarity. A divided fruit of the Quince is shown at *fig. 136*, and it corresponds very closely in general form to the Rose hip. The ovary consists of five cells, each of which contains several seeds.

The thick, fleshy part which surrounds the cells and forms the edible part of the fruit, like the same part in the Rose hip, is the receptacle, which has grown up into this form and become juicy and succulent.



140. Section of Cherry Flower.

The fruit of the Thorn, (*Crataegus*), and that of the Mountain Ash are formed in the same way; they are, all of them, the receptacles drawn up and fashioned into a globular, oblong, or oval form, and become more or less pulpy and succulent.

The mature ovary, which in most plants forms the pericarp or seed-vessel, is what we call the core in the Apple, Pear, etc.

The resemblance to the Rose which we have just traced in a few fruits is very close and easily perceived; the main point is that the receptacle in each case has developed in almost the same form. But it might take quite a different shape, and then we should have a very different looking fruit; there is no limit to the number of forms that might have been produced. Let us suppose, now, that the receptacle, instead of growing up and fashioning itself into the form of a tube or urn, simply swells upwards and outwards, becoming a solid conical or semi-spherical mass and bearing the numerous pistils all over its surface; in this case we have a fruit formed precisely like the Strawberry; and such the Strawberry is. There is no difficulty in satisfying one's self of this

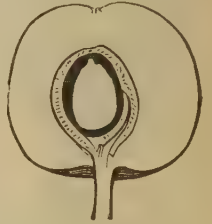


Fig. 141. Cherry.



142. Section of Peach Flower.

if one will watch the flower and the little green fruit, see it swelling out, and then observe embedded all over the surface of the ripe berry what we call the seeds, but which are really little nuts containing the seed,—that is, they are the ripened ovaries, scientifically the fruit. The berry is the receptacle changed, enlarged and become a succulent, juicy, fragrant and delicious fruit.

The Plum and the Cherry, belonging to the same family of Rosaceæ, are a step further re-

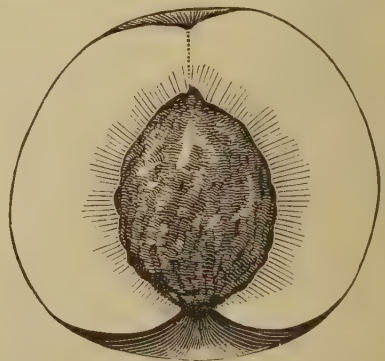


Fig. 143. Peach. Section of Fruit.

moved from the Rose type than the fruits we have just considered. A flower of the Cherry is shown at *fig. 140*, and what will now be said in reference to it applies equally to the Plum.

It will be noticed that there is only a single pistil, a single ovary, and usually there is borne but a single seed; there are really two ovules,



Fig. 144. Almond. Section of Flower.

but seldom more than one is developed. Our flower shows a well-formed ovule in the ovary; this ovule, when fertilized and developed, becomes the seed, and the ovary the fruit. The calyx, with the petals and stamens, falls off as the flowers decay, and the style of the pistil drops

off from the swelling ovary, which continues to enlarge until it becomes a full sized Cherry, as shown at fig. 141. Our engraving is that of half a fruit, so as to show the seed in the stone and the stone in the pulp. Such a fruit is called a drupe. Referring now to the well established theory that the ovary is a transformed leaf, and that a leaf consists of three separate layers or tissues, as already explained, we find that the layer corresponding to the upper surface of the leaf is the thin skin, the middle tissue of the leaf is represented by the juicy pulp, and the thick tissue of the under side

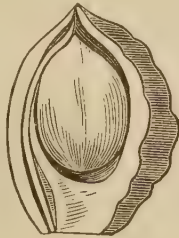


Fig. 145. Peach. Open Stone.

of the leaf by the hard stone; in other words, the skin of the Cherry is the epicarp, the pulp is the mesocarp, and the stone is the endocarp. The flowers of the Peach and of the Almond show a structure similar to that of the Cherry, and their fruits correspond in their parts. In the case of the Almond, however, the mesocarp or middle tissue is thick, dry and corky,



Fig. 146. Almond. Section of Fruit

Apple, Pear, etc., or what we may call the pippin fruits, have five ovaries, and produce several or many seeds. We shall see presently that this fact of a single pistil of the flowers of the stone-fruits has no relation to their difference

in development. Why these stone-fruits should be the enlarged ovaries, and the pippin fruits the enlarged receptacles, is one of those mysteries of vegetable life that no searching has found out. We perceive the facts, but the causes are hidden.



247. Almond. Open Stone.

If we will fancy a number of little Cherries seated on an oblong receptacle, we should have in imagination a fruit like the Raspberry; for it is a collection of little fruits joined together; each little part of the Raspberry is a *drupe*, or a fleshy, juicy ovary.

The flower of the Raspberry, unlike that of the Cherry, has numerous pistils standing on one common receptacle. When we pick the Raspberry it is pulled off from the receptacle, which remains attached to the flower or fruit stem. Figure 148 shows a Raspberry cut vertically, so that the manner in which the separate drupes are seated on the receptacle is clearly seen. A single drupe of the same berry is shown at fig. 149; the little nut or nutlet containing the seed is seen in the center. It is unnecessary to say that these figures represent most of the fruits and flowers and their parts magnified. A Blackberry differs from a Raspberry only by its adherence to the receptacle, which also becomes soft and pulpy to some extent—much more in the best of the cultivated varieties than in the common wild berries.



148. Raspberry.

To summarize our investigation, we find that when we eat an Apple or a Pear we eat really the end of the flower or fruit-stem, which has become pulpy and juicy; when we eat a Strawberry we again eat a flower-stem in which is embedded a multitude of seed vessels, each containing a seed; when we eat a Cherry or a Plum we eat a part of a ripened ovary or seed-vessel, and this we know to be only a transformed leaf; and in eating a Raspberry or a Blackberry we eat a cluster of succulent seed-vessels and the seeds they contain.



149. Raspberry. Single Drupe.

An examination of many other fruits would be no less interesting than those we have now considered, but our attention has been purposely directed to one family of plants—the Rosaceæ. We have seen by what slight changes fruits are moulded into one shape and another; commencing with the flower, we can trace its gradual development, step by step, until we look with admiration upon the graceful

form and glowing color, and scent the delicious aroma of the ripened fruit. The causes that produce the many forms of fruits are so few and simple that they would at first, and without a full understanding of the subject, seem to be insufficient; like the few bits of glass of different sizes, shapes and colors in the kaleidoscope, which the least change throws into a new arrangement, so the change of form in two or three of the floral organs, the growth of a few cells more or less in this or that direction, determines a new form of fruit. The more we understand of the operations of nature, the more readily shall we perceive the simplicity of her processes and the profuseness of her results.

MY GARDEN.

I had a vegetable garden last summer, and there is a good deal of fun in growing vegetables, though I suppose the girls don't think so, for I never heard of girls growing vegetables. They always want flowers; and I like flowers too. I commenced with Lettuce, and I made two rows; one was Cabbage Lettuce and the other was the Cos, but I sowed it so thick that Father said if I did not pull up almost all it would be spoiled, so I only left a plant every five inches. I sowed it so early that it froze a little, but that didn't hurt it. In June I had plenty of big heads. In April I sowed Radishes, but they were not very good. I guess it was too cold and the ground too hard. I shall have a better place next summer. In May I sowed Cucumbers, and they did first rate. I made two hills and put a basket-full of hen manure from my chicken house in each hill, and mother says we never had such fine Cucumbers. Next summer I shall try some Melons. Besides these I had four rows of Carrots and four of Beets. Next year I think I will have a border of flowers around my garden.—JAMES T., *Michigan*.

A BOY'S FLOWERS.

MR. VICK :—I must tell you something about my flowers. I suppose you will think it strange when I tell that I am a boy, and a farmer's son, too, and yet a great lover of flowers. The Tulips and Hyacinths I planted are now sleeping quietly under the snow, waiting for spring to wake them up to life and beauty. Just two weeks ago I picked two lovely Pansy blossoms from my garden, and Novemer 10th I picked a nice bouquet of Stocks and Pansies. Pansies are my special favorites. From the last of June until the middle of November my Pansies were perfectly grand, blooming freely and constantly. In the very hottest weather I had Pansies two inches in diameter. They had no shade and were fully exposed to the sun all day. The

colors were bright and clear, the markings distinct and beautiful, and they were well shaped and firm. I kept them well watered and never let the ground get dry. I had two double ones one inch and a half in diameter,—the yellow-margined,—but no seed.

From one paper of Phlox I had thirty different kinds, and such a dazzling sight it was. I also had a grandiflora Petunia five and one-fourth inches in diameter, and two of them four inches in diameter. I have had better success this year than ever before. I think your MAGAZINE splendid.—NELSON F. B., *Foxboro, Ont.*

MY EVERLASTING.

MR. VICK :—Will you please tell me the name of the Everlasting Flower I send you in a little box? I have grown it in my little garden, last summer and the summer before. It is white—almost like a little white star. It is pretty when you pick it in the summer, and it is just as pretty in the winter. The plant is not handsome, for it is stiff and crooked, and looks as though it wanted



AMMOBIUM FLOWER, NATURAL SIZE.

to be a wild plant, and meant to be. After all it is rather pretty, because it is strange looking. It is not a bit like any other plant I ever had. Please say what its name is. I took it to school, and our teacher, who knows a good deal about flowers, couldn't tell, but said send it to Mr. VICK.—JANE S.

The flowers are received, and proved to be *Ammobium alatum*, a very pretty and useful white Everlasting. It grows very freely from seed. The branches, as suggested, are stiff and



AMMOBIUM PLANT.

angular; indeed, the stalks are often square instead of round, and sometimes winged. The plant flowers for a long time. It first came from New South Wales, where it was found growing in almost clean sand, and for a time it was called *Sand-flower*, and the Latin name, *Ammobium*, means the same.

READING THE PANSIES.

"Now Mark, you've been robbing my Pansy bed, and I'll be judge and jury, and sentence you to swing us girls for half an hour, to punish you for it!"

The speaker was Lina Ray, and the offender was Mark Hazel. They were surrounded by a merry group of friends, who were there to celebrate the anniversary of Lina's birthday. They were swinging in a grove near the flower garden when Mark, who had an eye for everything beautiful, came up with his stolen treasures, and was playfully sentenced by his hostess.

"Humbly I'll obey," he said, bowing low with mock humility, "but on whom shall I bestow the beauties which have cost me so dearly?" and he looked inquiringly at the bevy of laughing girls who had gathered around.

Half-a-dozen hands were stretched out, and as many different voices began merrily to clamor for the little bunch of Pansies held temptingly beyond their reach. But Mark turned to Lina, who alone had not asked for the flowers, and placed them in her hand.

"Let my offering find favor in thy sight, oh Queen, but I ask no abatement of my sentence, since it keeps me near my royal mistress."

He was assailed by a merry shower of expletives from the disappointed ones, but he thought only of the happy light that flashed over Lina's face. He was conscious, too, of an unusual throbbing at his heart, as if some new power was rapping for admittance there. He had no time for reflection, however, for merry May Mylot called out,—

"I'll tell you what, girls, let us read Lina's Pansies,—we'll find out the very secret thoughts of his heart!" and laughingly she siezed the dainty bouquet. "Here, May, sit down on the swing by Lina and be fortune teller for her and Mark."

Mary Hooker, looking as little like the traditional fortune teller as possible, took her place, and her pretty fingers lovingly strayed over the petals of the Pansies, as in an undertone she recalled some half-forgotten lines. But soon she began aloud:

"Here are three pur-

ple Pansies; they are for dreaming, and I guess their dreams must be pretty bright now-a-days. Then here is a blue Pansy; that is for truth—lucky he found it, isn't it? And here is a white one; it is for prayers, but I see a spot on it, so I guess there is a little selfishness in his prayers. 'Bronze Pansy for wealth,' but this is not as bronze as it might be, so I guess their wealth will not be burdensome. 'Black Pansy for weeping,' but as there is no black one here I suppose it will be all sunshine for them. 'Bright, rich, golden Pansies for May-times love troth,' and just see here, one, two, three, four golden Pansies;—did you ever!"

There was considerable merriment and good-natured chaffing, then Mary continued:

"There is no 'crimson Pansy for joy glad and lasting,' but there are two 'lavender Pansies for joy, calm and sure,' and I guess that is just as good. They'll not be a monotonous couple, either; for here are 'odd, varied Pansies, for memories sad, happy, merry and tender;' and here are two 'dainty pink Pansies for innocence pure.' • Pretty well done, Mr. Hazel. You've arranged them nicely. John, here, never thinks to put in a green leaf—oh!—wait—I've just thought—

'All these I give thee, with the green leaves for hoping,—Don't forget the hope, darling, whatever betide,—

And as in these brown seeds royal beauties lie hidden,
To bud fairy-like, by the sweet sunbeams bidden,
So my true love for thee in my weak words doth bide.'"

"Good, good! That's best of all," said several voices, and then there was an adjournment to the bed of Pansies.

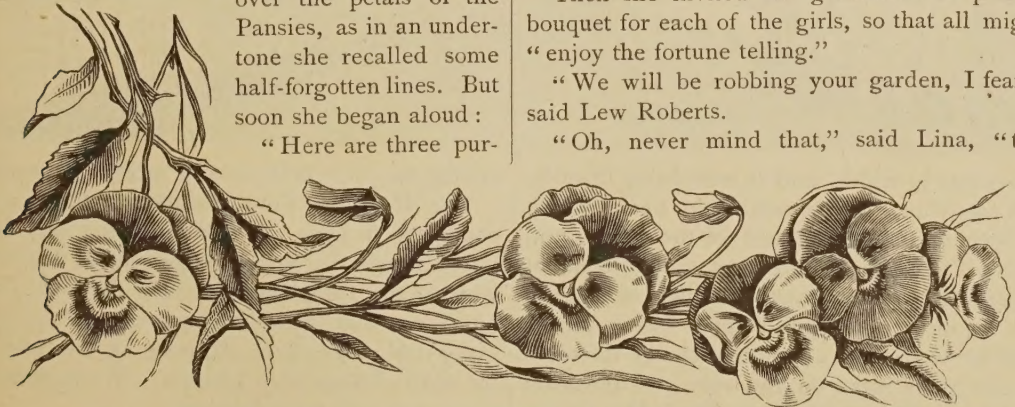
"Isn't it handsome? Lina where did you get the seed?" said Rose Carroll, with a thought for the coming seed time.

"I sent to VICK's for two packets of seed, and I guess every one did its best, although a vicious cut-worm made sad havoc in that corner before I found him, and Willie's Bantams got out and scratched up the middle of the bed. You see there are no flowers there yet, but the plants are thrifty and will bloom by-and-by."

Then she invited the gentlemen to pick a bouquet for each of the girls, so that all might "enjoy the fortune telling."

"We will be robbing your garden, I fear," said Lew Roberts.

"Oh, never mind that," said Lina, "the



blooms will soon fade anyway, so we might as well enjoy them while they last! And see the buds! There will be a new lot out in a day or two."

Then there was an anxious search for every kind of Pansy to be found. Few could remember the significance of any color, so they only tried to get a variety. Some could find no pink, some no bronze, some no blue, and only John Hooker was lucky enough to find one of every kind. He remembered to put in a few green leaves, for once, so Mary concluded that there was "hope for him yet." Lew Roberts had a better memory than most of them. A golden Pansy, a white, a blue and a

pink one, with plenty of green leaves, was the offering he gave sweet Anna Ross, to be treasured up long after the hand that gave it had been plighted to her for aye.

They had a merry time in the old summer-house "reading the Pansies." Perhaps serious thoughts and noble deeds had their origin there, too, for though such tender, helpless things, flowers speak to loving hearts with words that endure long after their brilliant petals have turned to dust.

And when the merry company separated, each to go his, or her, own way, it was with happy hearts, none the worse for their communion with the Pansies.—R. D. BLAISDELL.

THE GREAT GRAPE VINE.

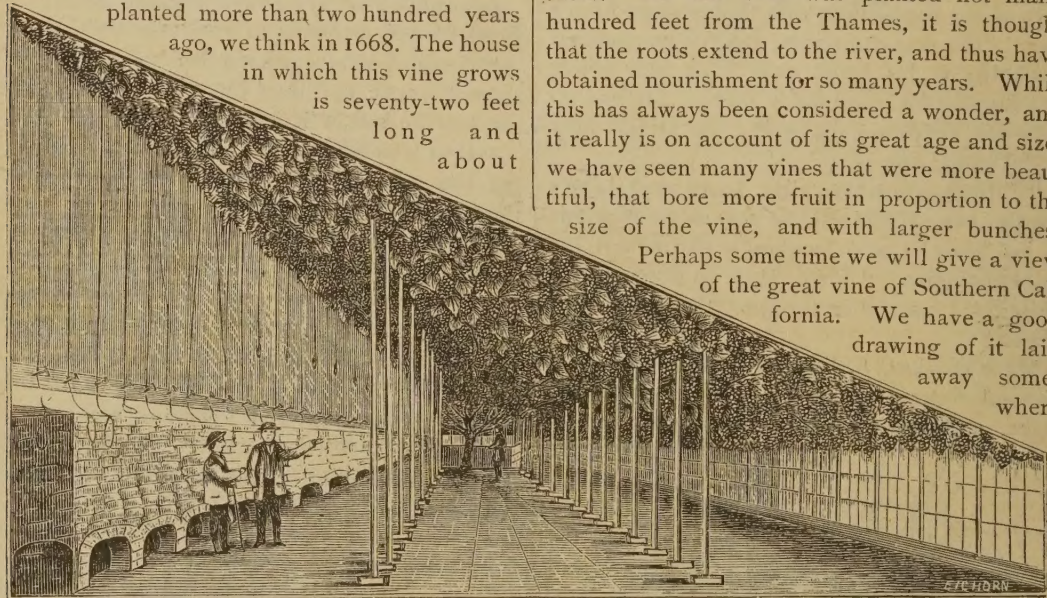
MR. VICK:—You very kindly answered the inquiry of JENNIE in the last number, and spoke of some time showing us a picture of the wonderful grape vine, which you said was once thought to be the largest in the world. We have been talking about that vine, and guessing at its size, and how many bunches of grapes it bears, and whether they are larger than our Concords, which is the largest kind we have in our garden; so we have become anxious to know something about it. If you can find room, will you please tell us about it in the next number? My History says the Palace was built in the reign of Henry VIII, but we want to know the year.—FRANK.

This Hampton Court vine is in a glass house, as will be seen by the engraving, and it was planted more than two hundred years ago, we think in 1668. The house in which this vine grows is seventy-two feet long and about

which will not ripen in the garden, like the Concord, Diana, &c., but requires to be grown under glass in this country, like other European grapes, because in the open air the fruit becomes covered with a kind of rust or mildew. In California the foreign grapes do nicely.

The Black Hamburgh often bears bunches weighing more than two pounds each, and the berries are very large—about twice the size of the Concords. The bunches on the vine at Hampton Court were not large when we were there. As this vine was planted not many hundred feet from the Thames, it is thought that the roots extend to the river, and thus have obtained nourishment for so many years. While this has always been considered a wonder, and it really is on account of its great age and size, we have seen many vines that were more beautiful, that bore more fruit in proportion to the size of the vine, and with larger bunches.

Perhaps some time we will give a view of the great vine of Southern California. We have a good drawing of it laid away somewhere



thirty feet in width, and is completely filled by this one vine. We measured the trunk, which is seen at the further end of the house, and found it to be nearly three feet around about at three feet from the ground, or about as large as the trunk of a full sized apple tree. At the time we were there a person in charge informed us that there were on the vine two thousand bunches. The variety is the Black Hamburgh,

among our large collection of artistic treasures.

The Hampton Court Palace we think was completed in 1510. It contains some very fine old paintings that are much prized, and in fine weather the Palace and grounds are visited by hundreds, and perhaps thousands, of people every day, some from all parts of the world, but most of them from London. We happened to meet several from America.



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GROUP OF GERANIUMS.